ANNALS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

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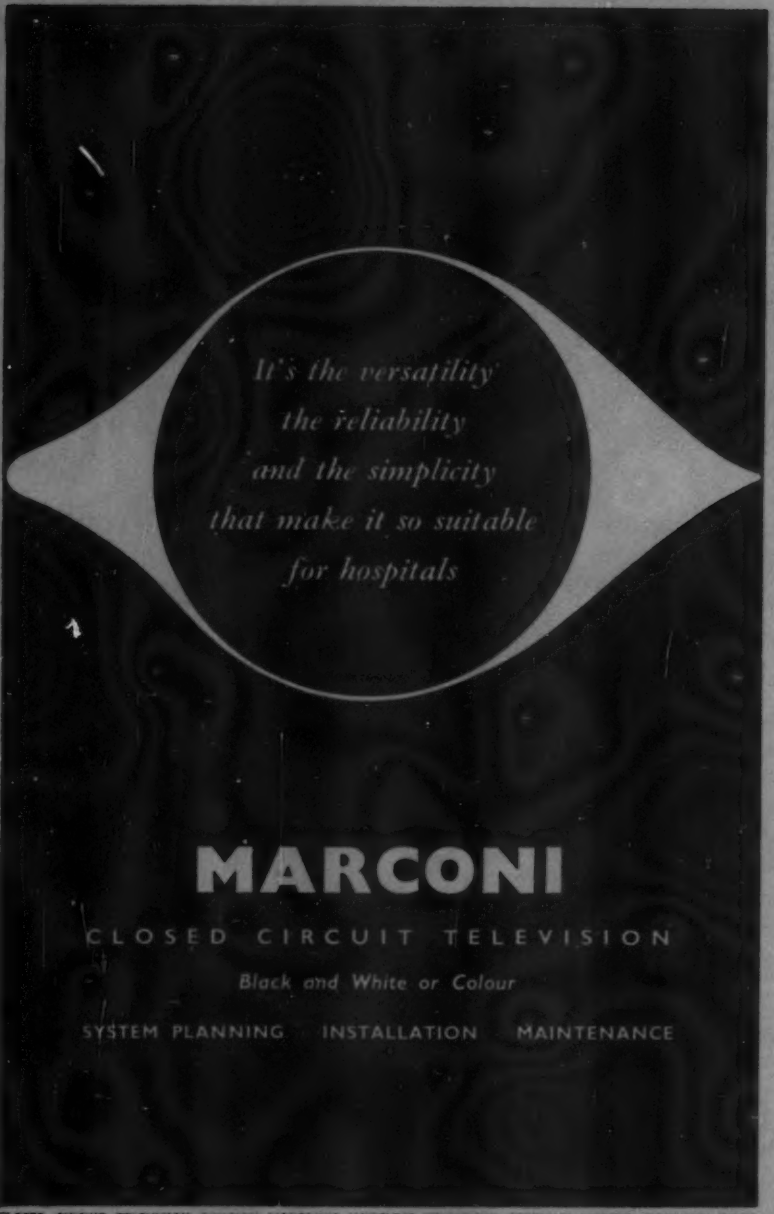

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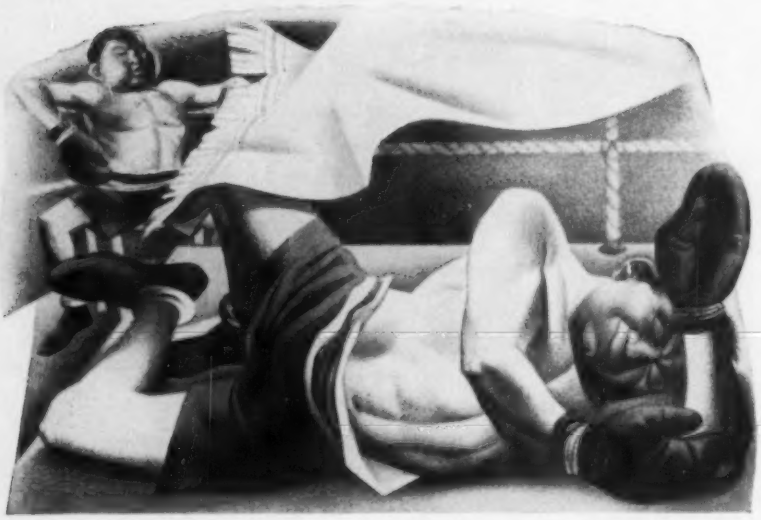

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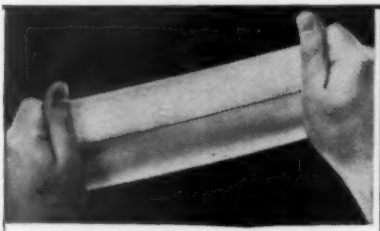

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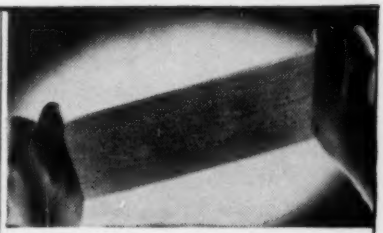

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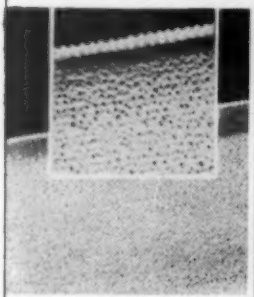

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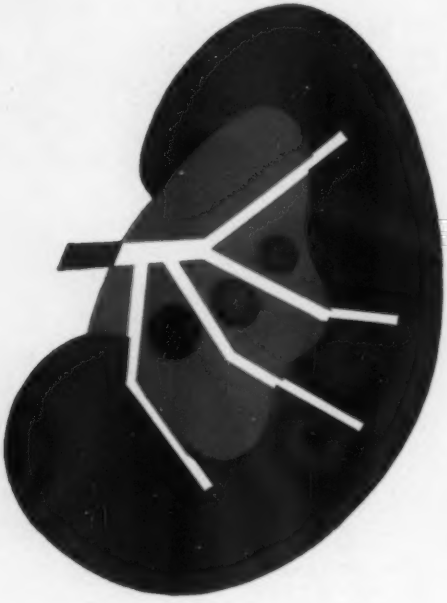

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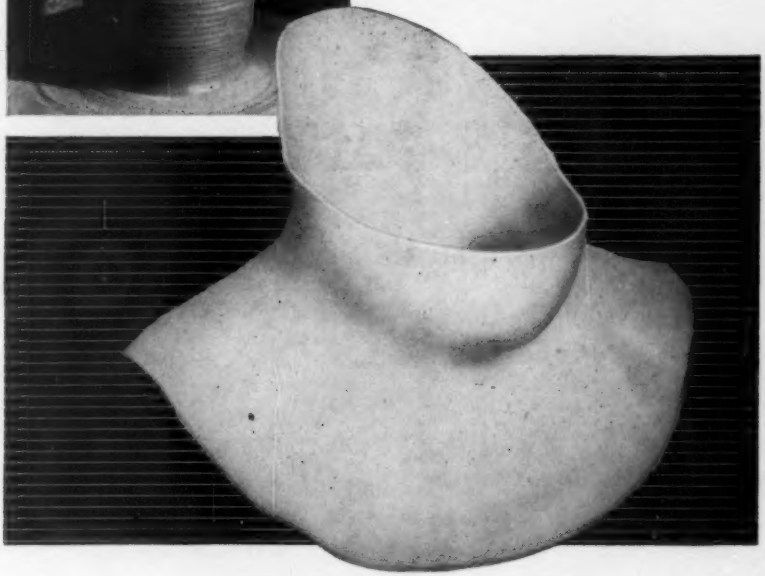

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CONTENTS

JULY 1961

	Page
Museum, Research and the Inspiration of Hunter — Sir Russell Brock	1
Honours Conferred on Fellows and Members	27
Carcinoma of the Oesophagus: Reflections upon Surgical Treatment ... ... E. E. Dunlop	28
Donations	53
The Lister Festival	54
Appointment of Fellows and Members to Consultant Posts	56
Ceremony of the Presentation of Diplomas	57
Anatomical Museum	62
Grant of Fellowship Diplomas	63
Proceedings of the Council in June	65
Faculty of Dental Surgery	68
Election of Fellows to the Board of Faculty of Dental Surgery	70
In Memoriam: Sir Geoffrey Jefferson, C.B.E., F.R.C.S.	71
In Memoriam: Dr. Howard Naffziger, Hon F.R.C.S.	74
Diary for July	76
Diary for August	76

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MUSEUM, RESEARCH AND THE INSPIRATION OF HUNTER

Hunterian Oration delivered at the Royal College of Surgeons of England

on

14th February 1961

by

Sir Russell Brock, M.S., F.R.C.S., Hon. F.R.A.C.S., Hon. F.A.C.S.

Surgeon to Guy's Hospital and to the Brompton Hospital

MR. SENIOR VICE-PRESIDENT, Members of Council, Ladies and Gentlemen, I must first express my thanks to the President and Council for the great honour accorded me in being asked to deliver this, the 91st Hunterian Oration.

The oration was inaugurated in 1813 by Hunter's two trustees, Matthew Baillie, his nephew, and Sir Everard Home, his brother-in-law. The first oration was delivered in 1814 by Sir Everard Home himself. The title page of Home's published oration tells us that the oration is to be

In
Honour of Surgery
and in
Memory of those Practitioners by whose Labours
it has been advanced.

It was at first delivered annually and then, after 1853, biennially.

Although every Hunterian orator must be worried about finding something to say that has not been said many times before, a study of Hunter's life and work discloses that much can still be found to speak about. For example, the recent centenary of Darwin's *Origin of Species* reminds us that Hunter anticipated Darwin in much of his observation and thought and indeed Darwin drew on his material. An analysis of this aspect alone of Hunter's work would form a fitting subject.

As my chief executive office in the College is Chairman of the Museum and Research Committee I intend to speak about the duty and policy of the College in regard to the Hunterian museum and to research. Both of these meet on the common ground of Hunter's life; both are important in the life of the College now and in the future. The Hunterian museum is an especially topical subject owing to the impending completion of its new quarters. Research is very relevant to the declared policy of the College to concentrate on the development of this part of our many activities; it also leads to the final theme of my address—the inspiration of Hunter.

SIR RUSSELL BROCK

JOHN HUNTER

Before I deal with his museum, some words are needed about John Hunter for the benefit of those among you to whom this remarkable man is little more than a name. Those who are familiar with his life and work must be patient for a few minutes.

John Hunter, a lowland Scot, was born on either 13th or 14th February 1728. His father owned and worked a small farm at Long Calderwood in Lanarkshire, near the village of East Kilbride, some seven miles from Glasgow. The farmhouse where Hunter was born and brought up is not much altered and can be visited to-day (Fig. 1).

Fig. 1. Long Calderwood: Hunter's Birthplace.

His early education was poor and incomplete. At the age of 17, when he could still neither read nor write properly, he went to Glasgow to help his brother-in-law as a joiner and cabinet maker. Three years later this business failed and in 1748 he accepted an invitation from his brother William to join him in London to help in his School of Anatomy. William was already a successful anatomist and teacher and became a skilled and successful obstetrician. His achievements, although overshadowed by those of his younger brother John, were considerable and have brought him independent fame.

John Hunter had found what he wanted and threw himself wholeheartedly into his anatomical work. Soon he was able to study surgery under Cheselden and later under Percival Pott, while continuing his work in the dissecting room. In 1760, 12 years after coming to London and at

the age of 32, he joined the army as a surgeon and went with the expedition to Belle Isle where he spent two years. He was soon thoroughly bored with the army, but used the occasion to study natural history and acquired some 200 specimens which he brought back to London. These formed the beginning of his collection, and thereafter one of his chief interests was the building up of his museum.

On his return to London he began to practise, his intention being to combine surgery with teaching and research. After several disappointments he was elected surgeon to St. George's Hospital in 1768 at the age of 40.

His position was now secure, although not without continuing anxieties. His life was one of sustained and intense hard work from early morning until late at night.

His activities were fourfold: the practice of surgery; the teaching of students; the building up of his museum; and research. These were all integrated as is shown by the fact that, although his practice was large and lucrative, he was constantly short of money because he used his earnings to subsidize his museum and his research. His achievement in this connection alone was notable, for how many men to-day, starting from nothing, could build up what he did? However, we are not concerned with his financial success as a practitioner of surgery; we are met together to-day because of his other achievements.

His headquarters were at No. 28 Leicester Square, where he also built a large museum and a lecture theatre. He also had a country home at Earl's Court, then two miles from London, which he used principally for his studies in natural history and his animal experiments. Clift has left it on record that his household, including his pupils, assistants and servants, for whom he had to provide, never numbered less than 50 persons.

His hard and at times quarrelsome mode of life was rendered even more burdensome by a major episode of coronary thrombosis at the age of 44, succeeded by angina pectoris and by various later severe episodes of which he has left, inevitably, a magnificent clinical description. It was this cardiac affliction that was to be the cause of his dramatic death at the Board meeting at St. George's Hospital in October 1793; an occasion which fulfilled his prophecy that his life was " at the mercy of any rogue " who succeeded in provoking him.

His death revealed his affairs were in a sad state, as he himself well knew would be the case, because all his earnings had gone into his research and into his museum. This, indeed, was his only real asset; it contained 13,600 specimens and preparations and had cost him some £70,000. If we reflect on the present-day value of that sum of money we cannot fail to marvel that, in addition to his great scientific attainments, he was able to

earn so much to finance his museum and research. Who could possibly do it to-day? Surely only a remarkable inspiration and intensity of purpose could have fortified him to succeed in it.

In his will he expressed the hope that his museum would be bought by the British Government or, alternatively, by an interested foreign government. At that time England was at war and money was not forthcoming.

Fig. 2. Professor Grey Turner.

It is not possible for me to say more about Hunter's life, and to those who wish to know more of his story I commend the numerous accounts, both long and short, that have been published. Many of the Hunterian Orations contain excellent and concise biographical essays. The continuing interest in his life and affairs is shown by the fact that during the last 10 years some six books have been published about him.

My own remarks have been planned so as to bring us to that very important occasion in the history of our College, namely the acquisition of the Hunterian Museum.

THE MUSEUM

I do not intend to spend my brief time on a factual account of the museum, which alone could constitute a complete oration. This was done by Professor Grey Turner (Fig. 2) in his masterly oration in 1945, entitled

"The Hunterian Museum, Yesterday and To-morrow". Everyone interested in the affairs of the College and its museum should read Grey Turner's oration, which is still obtainable in book form. In it he tells how six years after Hunter's death the Government was finally persuaded to pay £15,000 for it.

The Hunterian Museum is now so much a part of our College that it is disconcerting to learn that it was first offered to the Royal College of Physicians, who declined it, and then to the Royal Society and the British Museum, who also refused it. Only then did it come under the care of the Corporation of Surgeons which, in the following year, 1800, became the Royal College of Surgeons. It is significant that it was first offered to what were already academic bodies and not to what was virtually a City Company with a basically vocational origin until Hunter's insistence on a scientific approach to surgery opened a new era which was simultaneously marked by the acquisition of his museum and of true academic status. Authority must even then have realized that, although Hunter was a surgeon, his contributions were not related only to surgery but belonged to science as a whole.

The responsibility for the Museum has since then been shared with the Hunterian Trustees, who co-operate with the Council of the College in its care. It is fitting that we should acknowledge with gratitude all that the Hunterian Trustees continue to do to honour their responsibility after over 160 years. They are ever active, vigilant and supremely practical in their administration.

The burden to the College has been a heavy one, and its commitments can be partly judged by Sir Rickman Godlee's estimate in his oration in 1910 that the College had spent no less than £500,000 on its museum. I leave you to consider how much more it must have expended in the half-century since then, reminding you also of the disaster which befell us on the night of 10th May 1941, when high explosives and fire completely destroyed the museum rooms as well as much of the rest of the College. The destruction by an ill-chance spread to involve the basement and sub-basement in which many of the specimens had been stored in what was thought to be reasonable safety. Nearly two-thirds of the specimens which made up the Museum were destroyed; fortunately the loss fell less heavily on the Hunterian specimens; these now number 3,466.

The task of restoration that faced the College was immense, enough to fill the heart with despair. The problem was faced under the determination and guidance of that great President, Lord Webb-Johnson.

The provision of new quarters is at last nearing completion, and the Hunterian Museum will arise from its ashes when Phase IIIB is finished, it is hoped in early 1962.

Fig. 3. The entrance to the new Hunterian Museum.

Fig. 4. The interior of the new Hunterian Museum.

The task of rehousing the Hunterian Collection was rendered more difficult because of the differences of opinion about the place it should occupy in the new College, both architecturally and philosophically. Veneration for it reached such a degree in some quarters that there was a danger it would so dominate the new building as to encroach upon the space available for essential new departments. It was imperative to avoid the mistake of making it into a magnificent mausoleum, dominating the College but out of proportion to those other activities without which the work of the College to-day would be incomplete and unbalanced.

Fig. 5. Professor F. Wood Jones.

It would seem that the final decision of the Council, in consort with the Hunterian Trustees, will result in a dignified, spacious and efficient new museum, very well sited in its position on the first floor. As the visitor ascends the staircase from the entrance hall and reaches the first landing he will find before him the worthy and imposing entrance to the new Hunterian Museum (Fig. 3), its first part occupying the site of the old Council chamber but extending through and beyond that into the new building (Fig. 4).

The Museum as Hunter conceived it

Hunter was far from the first to form a medical museum. Earlier ones arose sometimes as a basis for teaching, but more often as a collection of curiosities. It was unusual for a museum to be assembled with a systematic purpose or to illustrate a basic principle. We owe a debt to Professor Wood Jones (Fig. 5), another great exponent of the Hunterian

tradition in this College, for his masterly presentation of the purpose behind the Hunterian Museum contained in his essay entitled " John Hunter's Unwritten Book ". He reminds us that Hunter did not have the gift of clear expression and, in fact, was harshly criticized and even ridiculed for his confused and sometimes unintelligible lecturing and writing.

Wood Jones (1951) writes, " Many have admired the beauty and the range of his anatomical preparations, but they have for the most part regarded his museum as a collection of interesting specimens, prepared with great industry and at great expense by an enthusiastic surgeon. Few, if any, have appreciated it for what it is—John Hunter's great unwritten book. It is the medium by which he sought to express those great principles of life, which he so profoundly understood, but which neither by speech nor by writing could he make clear to his contemporaries."

Again, " Most surely he was not attempting to display the principles of the craft of surgery, as so many Hunterian orators have assumed. He was not engaged in making a museum of anatomical specimens on which to instruct his devoted pupils; and, above all, he had no aim at amassing a series of specimens to illustrate any of the existing schemes of the classification of living things, as some curators of his museum appear to have believed."

Wood Jones felt that through his museum Hunter was trying to tell, by the only method of which he was a master, some great truth that was a patent reality to him. This was the significance of Life itself. Thus he writes, " The whole plan of his museum demonstrates more clearly than any literary exposition could possibly do that his conception of the essential quality of life was very clearly defined . . . one of the oldest, and still the best definitions is that life is *capable of self-maintenance*. . . . Beyond question it was the conception that Hunter had in his mind when he embarked on his museum.

" As the thousands of specimens were grouped by Hunter when received into the care of the College those concerned with the normal anatomy were divided into two sections. The first section illustrated the anatomical development of structures in response to the function of maintaining the life of the individual; the second those for maintaining the life of the race. In other words Hunter's museum was a display of physiology as well as of anatomy."

We must accept Wood Jones's grand conception of the purpose behind the Hunterian Museum, but Hunter also sought, in the words of Grey Turner, " to explain those departures from normal with which surgeons had to deal "; he had studied and presented in the form of preparations, " the natural sequences of degenerations, disease and repair ".

In assessing Hunter's achievement in his museum we must remember how much the research worker in those days lacked in equipment and techniques. The basic knowledge of chemistry and physics was small and there was no biochemistry. Although Hunter often mentions the microscope, it is not clear whether he had more than a magnifying glass. In his last book (Hunter, 1794) he reveals his knowledge of the red blood cells and also describes leucocytes and their wandering action. He was familiar with the work of the early microscopists, but was unenthusiastic and thought they " probably imagined more than they saw ". This was doubtless because the 18th century lenses were of poor quality and caused much distortion. Modern microscopy still awaited the compound achromatic instrument to be introduced by Lister's father in 1830. As Wilfred Trotter commented, " In this atmosphere of embryonic science and primitive equipment Hunter worked with high faith and energy at problems which have resisted or yielded only grudgingly to all the resources of the modern world."

Hunter had to rely upon the simplest of techniques, but he surely would have welcomed all the techniques available to us to-day. He would have known that his collection of specimens, his museum, was only one small part of the story. Think with what joy he would have received the transformed microscope of to-day; with what excitement he would have gazed upon the new world opened to his eyes. We now have complex instruments and techniques which enable us to study, not just the gross structure of cells, but their innermost mysteries; their chromosomal arrangement, their internal chemistry, their enzyme content. We can study the physiology of cells by techniques such as fluorescent microscopy, we have X-ray microscopy and, even more remarkable, we have the electron microscope.

Since Hunter's day we have modern physics with its electronics and isotopes; the whole vista of bacteriology and of virology has been thrown open to us; we have tissue culture; we have biochemistry with its modern wonders of analysis which appear almost magical to persons like myself who view it through the memory of our student days of 40 years ago.

Hunter would have had no hesitation in assigning the proper position of his museum in our present scheme of things. He would have warmly acclaimed the College's modern departments with their up-to-date equipment and techniques to continue the study of all those mysteries of life which fascinated him, which he devoted his life to studying and which he wished to present to the world in his museum.

RESEARCH

From what I have already said it is clear that a museum is a means of presenting the results of research. It can also be used for further research, for teaching and for reference, just as a library can. In fact, a museum

might be called a variant of a library, a picture-book library. It is pertinent to remember that it was John Hunter who, in 1786, chided the Corporation of Surgeons for not having a surgical library and strongly urged them to form one.

The adulation of Hunter's museum is ill-conceived in relation to the grand plan of Hunter's life and work. His museum, being the expression of the results of his observations and research, must be subservient to his research, and it is this element of his life and work that we should admire more and seek to follow, rather than be side-tracked, as it were, on to his museum.

What did Hunter really achieve that has made us gather together to-day to acknowledge and praise? Garrison (1929) puts it very simply when he states that " Hunter found surgery a mechanical art and left it an experimental science ".

Set in the stone floor of Westminster Abbey, where John Hunter lies buried, is a brass tablet placed there by this Royal College; this records the admiration of the College for,

> " his genius as a gifted interpreter of the
> Divine Power and Wisdom at work
> in the laws of organic life and their grateful
> veneration for his services to mankind as
> the Founder of scientific surgery."

Hunter so impressed others by his methods and so persuaded them to follow his example that his inspiration and guidance have continued to this day as a great contribution to surgery. His direct contributions to practical surgery were few, and by themselves would not justify his inclusion in the front rank of the benefactors of mankind. Many lesser men have made more impressive practical contributions which have brought them considerable recognition, but Hunter's contribution was fundamental and was the foundation of a school of scientific thought.

It is often stated that one of the leading features of to-day that has led to such great surgical advances is our present recognition of the overwhelming importance of physiology in our approach to surgery. That t he basis of surgery to-day is to understand, modify and control physiology.

But this is not new: this is merely a recognition of the heritage that Hunter left us! One of Hunter's immediate disciples was Astley Cooper (Fig. 6) and in his introductory surgical lecture at the United Hospitals he said,

" Physiological knowledge is of the utmost importance to the profession of surgery. This was the rock on which Hunter stood, admired by the wise, abused by the ignorant, indefatigable in his research, he omitted no opportunity of exploding false theories and substituting true ones founded on facts established by experiments."

Astley Cooper followed the Hunterian doctrines closely and is perhaps one of the most celebrated of those inspired immediately by Hunter. It is not until we come to the immortal Lister that we find anyone who achieved so much from this inspiration, and in Lister (Fig. 7) it formed its finest flower. Wilfred Trotter, speaking of the horror of the hospitals

Fig. 6. Sir Astley Cooper.

and of surgery in the grim days of the Industrial Revolution, says: " It was in this darkest hour that the method of Hunter brought off its greatest stroke. Of that method Lister was a devout and explicit disciple. In five years from his going to Glasgow he had solved the problem of wound infection and modern surgery was born."

The closing words of Sir Charters Symonds' Hunterian Oration given in 1921 and with Astley Cooper as his subject were:

" The Hunterian era awoke in the minds of men a desire to explore the old ground by new methods, and so unearth the truth so long concealed. There was the spirit of adventure, like that which animated the Elizabethan explorers, the ambition of the healthy human intellect to extend the range of vision and knowledge."

I like this reference to the Elizabethan explorers, and I am reminded of an episode in the life of Sir Francis Drake, that great sailor, navigator and explorer whose courage and achievement in revealing the secrets of the 16th-century world can still be such an inspiration.

It is recorded that in 1573 Drake sailed into a sheltered bay in the Isthmus of Panama. The natives, who hated the Spaniards, took him inland until they reached the crest of a lofty hill on the central ridge of the mountains. Nearby grew an enormous tree, upon one side of which was constructed a ladder. Drake climbed this until he was 80–90 feet above the ground. He looked westwards across the miles of undulating peaks and tropical forest until the green of the jungle suddenly ended. Beyond it he could see faintly the rich, sparkling blue of an unknown ocean.

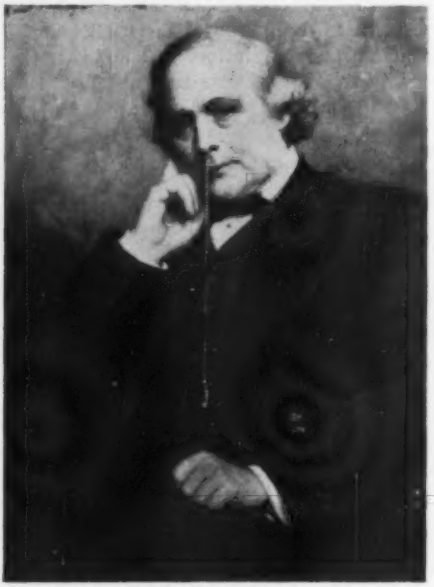

Fig. 7. Lord Lister.

Drake stared silently at the distant water. He was looking at the Pacific Ocean. It was, of course, the vast unchallenged waterway of Spain.

" I pray God," said Drake, " to give me life and leave to sail once in an English ship upon that sea."

This is a great and moving story and can be used almost as an allegory to illustrate so many of the difficulties and unsolved problems of existence on this planet. It is simple in essence and yet the more one reflects upon it the deeper and more satisfying and more comprehensive it is.

In similar fashion Hunter and Lister must have gazed at that far-off vision of successful and safe surgery.

We have seen this vision materialize just as Drake triumphed and lived to sail in that distant sea.

But it was not easy. There were the hardships and perils of rounding Cape Horn, during which he lost his two companion ships; but after great tribulations he entered that huge uncharted ocean and reached the west coast of America.

He then judged it unsafe, because of the Spaniards, to return by the way he had come and so decided to return to England by continuing on round the world!

What an extraordinary and breath-taking decision! His sufferings and perils, how he nearly lost his ship with all his companions and all his treasure are a part of history. So also is his eventual safe return to England after an absence of nearly three years to receive the triumphant welcome he deserved.

The success of Drake's great voyage depended on the efforts of many of his officers and crew. Some failed him, some deserted, but others stood by him in everything and shared in his success. So it is with the achievements of surgery, or of medicine. They are the result of the co-operation and labours of many: some surgeons, some physicians, physiologists, anatomists, pathologists, radiologists, anaesthetists, physicists, biochemists and also a host of other disciplines and callings.

An oration may deal with the facts of Hunter's life, his achievements, his surroundings or the Hunterian scene; it is, for example, pleasant to return to an 18th-century atmosphere. These all have their place, but the most deserving of exposition is the Hunterian spirit; it is this which provides the highest theme. It is not so much Hunter we should extol but the spirit which directed him and his followers. We merely typify this in the man himself.

If we ask ourselves what was the guiding spirit, we at once receive the answer—the thirst for new knowledge. The mechanism by which this is obtained is Research.

Policy in research

As a result of the inspiration that came from Hunter, Britain soon led the world in scientific surgical research. Many men were attracted from abroad, and particularly impressive is the group of those who came from the American Colonies, later the United States, and whose names are for ever associated with the foundation of the early American medical schools which, from Hunter's inspiration, recognized the need for scientific as well as vocational training. This aspect of Hunter's influence was fully and ably dealt with by Sir Ernest Finch in his Oration for 1957.

After Hunter's death the Hunterian tradition was carried on by many able men, and London continued to be the Mecca of surgical training. Astley Cooper, in particular, attracted many, and the old registers at Guy's

Hospital Medical School contain the names of pupils and dressers who came from the United States to study at a time when clinical facilities there were still scanty and almost limited to " jails, almshouses and prison ships".

The main reason for the visit of these overseas students was for training in practical surgery not available in their own country; it was fortunate and noteworthy that they also encountered the scientific approach. It is interesting to consider how surgical education in the United States is still conditioned and influenced by an odd mixture of vocational and of scientific training. On the one hand their growing communities are faced with the need for trying to keep up with the demand for large numbers of practical surgeons. This leads to that aspect of their training methods by which surgically immature young men make decisions about the need for operations and perform major ones in large numbers in a way that is basically unacceptable by our standards. Although, with the present development of the National Health Service, something of the same is now being seen in Great Britain.

On the other hand that great, restless, industrious and perceptive nation recognizes that true advance in surgery can come only through a full research programme and their training methods include this to a degree far beyond what has been seen in this country until recently.

The scientific spirit engendered by Hunter continued into the early decades of the 19th century, but England was soon to lose her position in the van of surgical research as the development of surgery proceeded along more vocational lines. In contrast tremendous advances were being made in physiology, chemistry, physics, pathology and other sciences. According to Harvey Cushing, in his address to the 17th International Congress of Medicine held in London in 1913, this was principally due to the restrictive legislation placed on animal experimentation by which " medicine was placed in the absurd position of defending the labours necessary for its advancement ". He felt that this was the reason this country, which had continued to produce great names in the experimental sciences free from any statutory restriction, had given so few notable successors to Hunter. He contrasted the position in Great Britain with the productivity of the Teutonic school, which had no restrictions.

The laws against vivisection have certainly played their part, but I feel we must also seek older and deeper influences.

Surgery was looked on in the past, and indeed often is to-day, as a lower pursuit than medicine; it was commonly an artisan-like non-intellectual occupation. It essentially did something to try and help the patient. This active interference might involve a rather crude technique in which intellectual advance was difficult.

In contrast, medicine dealt with " internal " diseases, those which do not so readily allow direct physical or external remedy. It was inevitable that from this should arise, in connection with medicine, a mystery, a meditative approach which produced an aura of superiority to the plain surgical craftsman. Upon this scene came William Harvey, who first inspired the physiological approach to the study of the body and of disease. Harvey was a physician, but his contributions belonged to science as a whole; they reached heights in which the artificial divisions between medicine and surgery cease to exist.

But after Harvey, even though the magic of his mantle fell upon medicine, few physicians followed his principles. The great advances in internal medicine in the late 17th and 18th century, from physicians such as Sydenham and Heberden, were *clinical* and therefore essentially vocational, and in this way were basically no different from the similar advances being made in surgery. It was John Hunter, a surgeon, who renewed the Harveian principles and gave the further great impetus to a scientific and experimental approach to the study of the body in health and disease. In this he rose above surgery, even though he was a surgeon. His methods, example and vision belong to science. His contributions once more illustrate the indivisibility of medicine and surgery. He himself fully realized and taught this indivisibility.

As Hunter's influence spread into the 19th century it encountered the tremendous expansion of clinical study of that remarkable age. Its earliest and perhaps greatest clinical figure was Laennec. There were many other great names from the continent; from this country the mode of advance was typified by the clinical giants such as Bright, Addison, Gull, Wilks and many others.

In surgery we had Charles Bell, Benjamin Brodie, James Paget and a few others who contributed to the science as well as to the craft of surgery; but the advances in surgery lagged behind the great clinical advances in medicine and the basic advances in allied sciences until Lister, following Hunter's methods and profiting from the discoveries of Pasteur, destroyed the chains which were holding surgery back and brought us into the vast fields of modern surgery. The opportunities for vocational and purely technical advances were now immense. It was now no longer medicine that was " internal "; the whole body systems were open to surgery which was no longer " external ".

As Edward Churchill has recently said, " There were decades during which operations based solely on anatomy forged ahead of the knowledge required to guide and control its use." This is understandable; there was, as it were, a " gold rush " when almost everyone was concerned with sharing the rich harvest of Lister's and Pasteur's work. During such a

time few men stand aside from the race and meditate upon more fundamental matters. With the harvest to be gathered there is little thought of the ground to be tilled for the next crop.

It was inevitable, therefore, that the late 19th century and the early years of this century should see the powerful continuance and dominance of the technical approach to surgery, with a few exceptions here and there. As the 20th century wore on and the rate of surgical advance slowed, the thoughts of many became directed once more to the need for a return to a more academic, a more scientific approach. Once the rapid technical advances began to run down or to outstrip the knowledge required to make them safe for the patient, it was time to review things. Advance could then only come from a reference of our problems to the basic principles of physiology and of allied sciences.

We have seen a later technical break-through in the case of cardiac surgery, which has leaped in 10 short years from closed operations to deliberate procedures upon the open arrested heart. This advance has, however, been made possible only by the free use of scientific and laboratory observations and experiments in allied basic sciences, and has incidentally led to many collateral advances in other techniques and in our knowledge of physiology and pathology. It has also led to the establishment of more surgical research laboratories throughout the country.

In contrast, in the more general fields of surgery we have seen less striking advances; in some fields we seem to have come to a halt. History belies that this can be so; nothing is static. We merely await a fresh surge forward. If we expect this to come from simple technical efforts we shall be disappointed, but if we concentrate on research into associated biological principles then we may at any time see another break-through. The major problems are indeed only too obvious, and we all think at once of such things as the grafting of organs and tissues, the control of wound healing and the control of cell growth—in particular, the control of neoplasia. These are all Hunterian problems and it is noteworthy that the present research in the College includes them all.

In our policy towards research we must recognize that there are many who do not wish to be research workers; they want to be practical physicians or surgeons, good doctors or good teachers—and rightly so too. There are many who will do best in the everyday practice of surgery, and there is a great need for them. Indeed it is one of the prime duties of our medical schools, our universities and of this College to produce them in large numbers. At the same time we must recognize there are many who are attracted to research, or who might develop an interest in it, and could make lasting contributions were they aided by opportunity and example. At present, few of our students and trainees are influenced actively

towards research and there is certainly a great temptation for the surgeon to deflect from research. This we must resist if we are to honour the Hunterian tradition.

Hard though it be to say it, there can be no denying that from at least the early years of this century the position of research in our training programmes in this country has become quite different from that in the American scheme of training.

Many think that there it has reached excess. The criticism has been made that too much time, money, energy and too many animals' lives have been fruitlessly expended. Be that as it may, one cannot ignore the fact that the opportunity, the stimulus, the facilities and also the inspiration are there.

In Great Britain by far the greater emphasis has been on the vocational side. More lip service has been paid to research rather than actual encouragement and direction.

We have bred many excellent, practical surgeons, probably the best in the world. Like, however, begets like, and as the main emphasis in so many of our centres has been on a routine training we encourage (possibly subconsciously) our young men to follow on primarily in this. They are led to think that vocational training comes first, and although they may rub shoulders with research they are liable to think that it is the exceptional type who indulges in it.

Again in many centres, until quite recently, there has been little more than fortuitous provision for surgical research, usually depending on the chance presence of someone that way inclined. It is not enough just to provide some facilities, and only when they are demanded. The research urge should be a living integral part of the work and life; certainly it was so in Hunter's environment. At present a registrar may fear to interrupt his clinical training to do a research post. The reverse should be the case. He should be encouraged to do so; not *compelled*, for not all are that way inclined, but the opportunity should be deliberately offered for him to refuse if he wishes. Even though he makes no useful discovery, the spell of training in the methods and disciplines of research can profit both him and his patients. Every school should have a registrar establishment large enough to allow at least one man to be seconded into a research post for 1–2 years. If this had been so during the last half-century we could have produced more original work than we have done and could have received less spoon-feeding from others. Also we could have shown less complacent criticism of that policy of others which has encouraged scientific expansion.

Happily things are now altering and more and more is being done in many centres throughout the country. The academic departments of the universities contribute their portion to research, but they have the dis-

tractions of administration and of undergraduate teaching. In Belfast, in addition to the formal chair of surgery there is a chair of surgical sciences. The Postgraduate Institute has recently opened a large department of experimental surgery. Edinburgh has had the Wilkie Institute for many years, and in this we are reminded of Lister's warmth of feeling for the university atmosphere and spirit of inquiry that he found in Edinburgh. He contrasted it with the atmosphere and policy which he found in the College when he was on the Council and stated his concern that it existed chiefly as an examining body. This even influenced him when he made his will (Guthrie, 1949).

He would have no such concern over the policy and performance of the College to-day. Our function as an examining body is a statutory obligation, our achievements in postgraduate education have a world-wide significance, but these are crowned by the steadily increasing amount of basic research that has been emerging, more especially since the Presidency of Lord Moynihan, who was in great part responsible for the revival of research in this College and for the establishment of the first new laboratories for this purpose in 1928. In 1930 Sir Buckston Browne, in a letter to the Council, said, " I therefore wish at the end of a long surgical life to do all I can to facilitate the labours of those willing to devote time to surgical observation and research "—and so we were given the Buckston Browne Research Farm at Downe, no doubt inspired by Hunter's experimental farm at Earl's Court. Here, for over a quarter of a century, much excellent research work has been done, and those who listened to Professor Slome's recent Bernhard Baron lecture presenting the year's work there cannot fail to have been deeply impressed.

Similarly, those of you who took the trouble to visit the demonstrations in the scientific departments within the actual College building on their recent " view day " will have been impressed by the immense amount of first-class work being done by so many people. Those who did not pay a visit should read the presentation of work in the annual report of the College, that also contains Professor Slome's lecture.

The universities have a duty in the matter of providing opportunities and facilities for research, but to a certain extent this is parochial or local. In so far as the grand plan of surgery throughout England, and indeed throughout much of the Commonwealth, is concerned, it is this College that should play a leading role. We have departments of anatomy, physiology, pathology, pharmacology, biochemistry, of research in anaesthesia, in dental science and in ophthalmology, but we have no organized department of surgery.

It is for this reason that the Council have decided that our present research activities, large though they be, must be completed by the establishment of a department of surgical science with a professor at its head.

This is a big undertaking, but one which we face with confidence. The problems of financing the department will be considerable; as also will be the provision of the essential clinical facilities. The part that experimental surgery, using larger animals, plays in surgical research to-day is so important that special attention will have to be paid to this. We intend to improve and enlarge the Buckston Browne Research Farm, but at the same time we remember that the siting of the Farm so far from London makes it desirable to have additional accommodation nearer.

The proposed new chair of surgical science will differ from the usual university chair in that the professor will be spared the distractions of routine teaching and of departmental administration. He will be able to devote his full time to his own investigations and also to directing and training young surgeons in the experimental and scientific approach to surgery. It should be not so much the original work he does himself, but the work he inspires in others, that will justify him. He should be the catalyst in the policy that seeks to direct more young men into scientific as opposed to purely vocational surgery.

Much will depend on the man chosen as professor, and this has led to misgivings on the part of some people. This can be no valid reason for not pursuing a project which has so much to commend it. This College has rarely lacked someone to come forward when he is most needed to supply a great service. Look, for example, how much that great man Sir Arthur Keith (Fig. 8) did for the museum, and how much he advanced the scientific stature of the College. We need someone of his character and ability now in surgical science both to organize and to inspire.

I have already mentioned Sir Francis Drake to you. I would like you now to consider Drake's prayer. This was not spoken as such by him but was composed from a sentence in a dispatch he sent to England while he lay outside Cadiz harbour in the perilous year before the Armada:

> " O Lord God, when thou givest to thy servants to endeavour any great matter, grant us also to know that it is not the beginning, but the continuing of the same unto the end, until it be thoroughly finished, which yieldeth the true glory."

Our director of research must not only inspire, he must also guide and regulate. I have emphasized the need for more research, but we must remember the dangers also. There is the " ivory tower " mentality, the lotus-eating existence in which research becomes an end in itself, or in which life is dreamed away playing with complex techniques or with fascinating apparatus! It has been said, " Research is a good servant but a bad master ". It is important for a director of research to prevent his team from wasting their time in a mistaken way.

This was recently the subject of a leading article entitled " Research without Direction " in *The Times*, which Sir Wilfred Fish supported in a subsequent letter. Sir Wilfred recently retired from the post of Honorary

Director of our own Department of Dental Science. This serves to remind us that John Hunter was a pioneer also in the scientific approach to dental surgery.

Fig. 8. Sir Arthur Keith.

Research and Inspiration

In my advocacy of the scientific approach to surgery I would not like it to be thought that I deprecate the vocational approach or think that no worthwhile advance can ever come through it. I have tried to point out that important advance by way of it is bound to be limited. This is because the horizon of purely vocational achievement is discernible, is commonly limited to the immediate technical problems and does not include fundamentals. A vocational method of training usually results in the habit of waiting for someone else to make the next step forward; to accept spoon-feeding from others as the usual method of improvement. The inquiring mind that can work through scientific methods and training knows no fixed horizon.

The vocational and the scientific attitude can often be usefully combined, and some great advances have resulted from this. I suppose one of the most notable is that of the introduction of vaccination by Edward Jenner. Jenner was a pupil of Hunter and became a close friend. He preferred the

life of a country practitioner to an academic career in London, but Hunter continued to correspond with him. It was the example, inspiration, constant urging and practical guidance of Hunter that directed this country doctor's thoughts and activities into observation and research into natural history. Hunter was also constantly worrying and making demands on many other friends. The attitude of mind engendered and fostered by Hunter in Jenner resulted not only in the discovery of a practical therapeutic step which rid the world of one of its greatest scourges, but also in the addition to our knowledge of some basic principles in immunity. Jenner surely lives with the immortals.

He achieved a " break-through " because he was conditioned to recognize and to pursue a possible answer to a problem he had come up against in clinical practice. This is the way by which the practice of surgery, the vocational life, can pave the way to advance. There are many who enjoy the ordinary practice of surgery and would abandon it with reluctance for an entirely academic life. In fact, strong arguments can be put forward against a totally academic training in surgery. I will not enlarge upon this, but there is little doubt that an academic life can be lived within horizons just as fixed and dull as those of a purely vocational life; especially if initiative is blunted by security and by too much routine administration.

It is easy to be complacent and to feel that the provision of full-time academic posts will ensure continuing advance, and we are in danger of this in Britain to-day. It is often desirable that the academic worker should meet the problems of clinical practice that can inspire thoughts and ideas for progress. It is for this reason that I am personally disturbed by too much insistence on big expansion of whole-time posts. Much good work can still be contributed by the part-time academic worker. Sir Charles Symonds in his Harveian Oration (1955) suggested that it would be a good thing if before a man begins a full-time academic post he should have spent several years in ordinary consultant practice. This has much to commend it, but at the present time the reverse seems to be favoured: that whole-time professors are more likely to be recruited from those who have been through a whole-time training programme.

I have already indicated the necessity at the senior registrar or registrar level for both opportunity and encouragement to spend one or two years in laboratory work by which training can be acquired in methods of investigation. If this is done we shall encourage and perhaps inspire many more men to mould their lives on a combination of academic and practical surgery. Many would wish this, but the opportunities are few. Our policy should be to encourage those men who wish to combine clinical practice and research by providing more posts for them. The universities can already provide some. The College provides some

facilities but should, and we hope will, be able to provide more, especially for its own Fellows who are attached to non-teaching institutions with no research facilities.

There are a few such combined posts within the National Health Service; for instance there are two at Guy's, but there should be many more. It has been the custom for a new consultant to receive four or five weekly sessions at his main hospital and, in order to fill his time and earn a living, he has to seek odd appointments in other hospitals. How much better would it be if, with proper safeguards, he could employ his remaining sessions in a research post within his main hospital. He could then be of much greater value to his hospital and might well make a valuable contribution to that scientific advancement of surgery which we all desire.

The young man seeking a problem for research often asks what he should choose. To him so much seems settled or proven. This is one of the weaknesses of the vocational or apprenticeship method of teaching, much of which has to be didactic. The answer is—almost anything and everything. There is scarcely any aspect or department of our knowledge that cannot benefit from rescrutiny, re-examination. The horizon is boundless, the possibilities are limitless. What our young man needs is not so much a field in which to research but encouragement, guidance and financing within that field.

Our young man also needs the encouragement of *Inspiration*. This alone can elevate and impel forwards. This should be the very spirit of the College. This is what we should learn to-day from our contemplation of Hunter's life. It is this aspect of College work which deserves oratorical treatment, and if I pass into such a phase you must bear with me for I think the situation justifies it.

I show you a portrait of Hunter in middle age; you will note that he is looking boldly forward as if viewing life (Fig. 9). There is a story that after Sir Christopher Wren had succeeded in building the great dome of his new cathedral Sir James Thornhill painted it. He had a young assistant who was not used to the height. Every now and then he would look down and shudder at the distance. Once when he was doing this Thornhill shouted, " Don't look down, boy; look up, look up! "

As you see in this, the most famous portrait of Hunter as an older man, he is looking *up*; he does not look down, shuddering at the difficulties and problems that may face him in his work (Fig. 10). He is inspired; he looks up!

We must also look up and tell our young men to do so. We must tell them of the limitless horizon that lies before them.

Most great men have the capacity for seeing further and more clearly than their fellows and act by pointing to new horizons. I have already given you the example of Francis Drake and his far-reaching, world-wide vision.

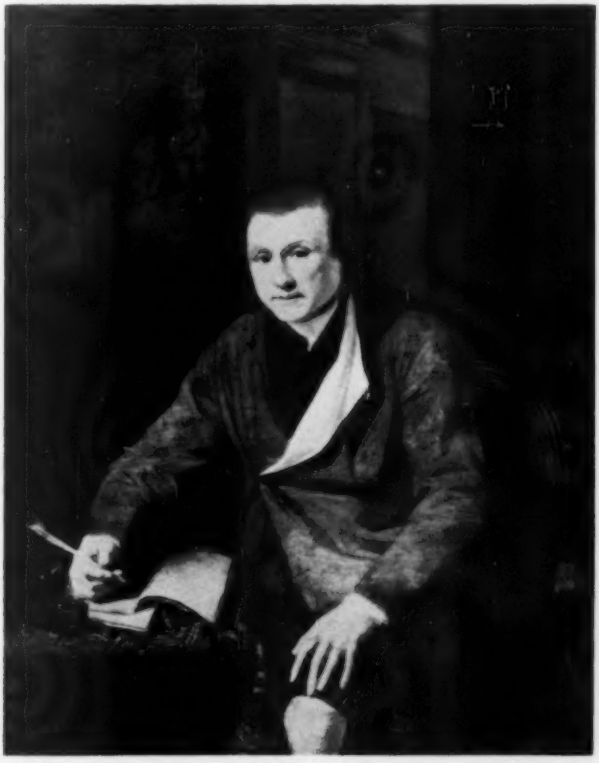

Fig. 9. John Hunter in middle age.

Such a one also was Cecil Rhodes, who, in spite of his mistakes, had great vision and achieved great things. Rhodes's dream of a United Africa is now passing through complex difficulties, but we cannot but admire the grand conception. It is difficult not to be deeply moved when one stands beside his monument on the slopes of Table Mountain (Fig. 11). You will observe the equestrian statue by Watts, entitled " Energy ". indicating one of Rhodes's attributes and also one of Hunter's.

Fig. 10. John Hunter, by Joshua Reynolds.

Fig. 11. The Rhodes Monument on the slopes of Table Mountain.

From the monument one gazes out over a magnificent vista stretching north as far as the eye can see, but Rhodes's words, " Yonder lies your hinterland ", apply not to what the unaided eye can see, but to those great countries too far distant for the eye to see but contained within Rhodes's vision.

Fig. 12. Rhodes's bust with Kipling's lines below.

Within a recess of the monument is a bust of Rhodes (Fig. 12), below which are inscribed those immortal lines written by Rudyard Kipling, himself a close friend of Cecil Rhodes and also having associations with this College through another friend, Sir John Bland-Sutton, whose health he proposed at the Hunterian Banquet in 1923, when Bland-Sutton was Orator.

" The immense and brooding spirit
Still shall quicken and control;
Living he was the land
And dead his soul shall be her soul."

These lines can be applied equally well to John Hunter; his immense and brooding spirit still can quicken and inspire this College, and dead his soul shall be its soul.

I had thought of concluding on this noble and inspiring note, but decided that it was too funereal; it is a note of death! Although in honouring Hunter's memory we look back to the past, it is his birthday and not his death we commemorate. We should not only look back on his work, we should also look forward to what his work inspired. Our

Fig. 13. The Arms of John Hunter.

note, on these Hunterian occasions, should be the awakening and continuance of the Hunterian tradition, and this should serve as a trumpet call to us.

At the end of this Great Hall in which we meet to-day hangs an emblazonment of Hunter's arms (Fig. 13), but unfortunately it lacks his motto, " Hunter, blow thy horn ".

HUNTER, BLOW THY HORN!

That is the note on which I wish to conclude this oration, the clarion call of Hunter for the continuing advance of surgical science within this College and throughout the world.

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HONOURS CONFERRED ON FELLOWS AND MEMBERS

IN THE RECENT Birthday Honours List the following Fellows and Members were graciously honoured by Her Majesty The Queen.

SIR SIMON MARKS, HON. F.R.C.S.	Baron
HARRY GUY DAIN, F.R.C.S.	Knight Bachelor
CHARLES FREDERICK WILLIAM ILLINGWORTH, C.B.E., HON. F.R.C.S.	,, ,,
IAN DOUGLAS MILLER, F.R.C.S.	,, ,,
NEVILLE MARRIOTT GOODMAN, F.R.C.S., M.R.C.S.	C.B. (Civil)
JOHN ORDE POYNTON, M.D., M.R.C.S.	C.M.G.
GEORGE HENRY MORLEY, O.B.E., F.R.C.S.	C.B.E. (Milit.)
WILLIAM JAMES MEREDITH SADLER, M.R.C.S.	,, ,,
PAUL WILSON BRAND, F.R.C.S.	C.B.E. (Civil)
CHARLES HERBERT ST. JOHN, M.R.C.S.	,, ,,
WILLIAM D'AUVERGNE MAYCOCK, M.B.E., M.R.C.S.	M.V.O.
EDWARD SIDNEY ELLIOTT, M.R.C.S.	O.B.E. (Milit.)
RALPH MARSHALL BATES, F.R.C.S.	O.B.E. (Civil)
MARGARET STOTE GLEN BOTT, M.R.C.S.	,, ,,
MARC ANTOINE EMILE DUVIVIER, M.R.C.S.	,, ,,
FRANCIS EDGAR STOCK, F.R.C.S.	,, ,,
ALBERT ROSS BOWTELL, M.R.C.S.	M.B.E. (Milit.)
ALAN SWAINSON TOWNSEND, M.R.C.S.	,, ,,
ERIC VERE CORRY, M.R.C.S.	M.B.E. (Civil)
EILEEN SPENCER MORRIS, M.R.C.S.	,, ,,
LEONARD ERNEST STEIGENBERGER SHARP, M.R.C.S.	,, ,,

CARCINOMA OF THE OESOPHAGUS: REFLECTIONS UPON SURGICAL TREATMENT

Cecil Joll Lecture delivered at the Royal College of Surgeons of England
on
28th July 1960
by

E. E. Dunlop, O.B.E., M.S., F.R.C.S., F.R.A.C.S.
Royal Melbourne Hospital

IT WAS ON a summer's afternoon in 1939 that I last saw Cecil Joll operate, and the memory of that leonine feast of surgery remains with me. I recall that the list began with four subtotal thyroidectomies, followed by a total thyroidectomy, a total gastrectomy, a total hysterectomy, then moved through three less arduous abdominal procedures to a precise unhurried close at 7.30 p.m.

Fig. 1. Cecil Joll, M.D., M.S., F.R.C.S.

That tall immaculate figure, with the elegant carnation in the button-hole of a correct frock coat, savoured an excellent cigar, and, seemingly as fresh as when the day began, passed on to dine where good food, wine and conversation abounded. His frame contained some source of prodigious energy, and was driven relentlessly by a mind which demanded intense purposive activity, and a passion for detail (Fig. 1).

Joll's gift for clinical organization was expressed particularly in the famous thyroid clinic of the Royal Free Hospital, and reflected in his great work *Diseases of the Thyroid Gland* (1932). Among other fruitful activities, he established a Cancer Clinic at the Royal Free Hospital, which worked in association with the then Royal Cancer Hospital, which he also served with great distinction.

He devoted a great deal of his masterly technique and dynamic energy to carcinoma of the stomach, and was perhaps most often engaged in oesophageal anastomosis in the course of total gastrectomy operations.

I now address myself to the title of my lecture with deep humility, which derives both from the sense of the minor nature of my achievements in treating this formidable disease, and from the consciousness of the even greater difficulty of making this contribution worthy of an occasion designed to perpetuate Joll's memory.

I am comforted a little in this respect by some words written by Joll himself in his Long Fox Memorial lecture delivered in Bristol (the city of his origin) in 1933: " Progress in our knowledge of Cancer is made bit by bit, rather than by any dramatic achievement which, at a bound, would justify our hopes of bringing malignant neoplasia into the category of a controllable disease."

Joll, too, whilst in no narrow sense a specialist, believed obviously in the concentration of individual purpose upon specific problems and particular organs.

My interest in this field was first aroused as a house surgeon under King in Australia, when he achieved his first successful Torek oesophagectomy in 1935, and continued under that great British figure Grey-Turner, who pursued the collo-abdominal operation, avoiding the pleural sacs.

The success of Japanese surgeons Seo and Ohsawa (1933) with bold transpleural resection and anastomosis of the oesophagus received scant attention from the Western world at the time. Nevertheless in the 1930's I recall Sir Gordon Gordon-Taylor also invading this realm.

The major conversion of Western thought and practice followed the success of Adams and Phemister (1930) with transpleural excision of a tumour of the cardia and oesophago-gastric suture. This advance was rapidly exploited by Garlock and Sweet in the U.S.A. and by Lewis, Franklin Tanner and many other surgeons in Great Britain.

Meantime Nakayama of Japan has added immense prestige and authority to that of his predecessors. There is also ample and growing evidence in the literature of large-scale contributions to the field in the U.S.S.R. (Petrov, 1959) and China (Wu *et al.*, 1955).

After the second world war ended in 1945, thoracic surgery was strongly established, and confidence was engendered by controlled respiration anaesthesia, the virtual conquest of operative shock, and perhaps less validly by antibiotic advances.

It could be stated that the principles of rational cancer surgery of the alimentary canal involving adequate exposure, resection of the cancer bearing segment and involved lymph nodes, together with restoration of continuity by suture, was applicable to all parts of the oesophagus.

The sense of a new and God-like dimension in cancer ablation by surgery has receded. Some like Ravitch *et al.* (1952) have focussed attention to palliation, and others like D'Abreu (1958) contemplate the surrender of the middle and upper third oesophageal cancers to the radiotherapists.

The advanced and formidable nature of the disease process and the aged and frail state of patients vie against our enthusiasm.

The disease process described by pathologists at autopsy is all too closely paralleled by surgical findings at operation.

The time is ripe for those with any considerable experience to evaluate the relief which has been afforded by the methods of treatment they have employed.

My personal experience relates to 180 patients who have sought relief between June 1946 and June 1960. Some have been shared with my colleagues, particularly Mr. J. I. Hayward of the Thoracic Surgery Department of the Royal Melbourne Hospital. The follow-up has been complete and personal except for 10 patients in Thailand and Ceylon who were not followed after the postoperative period.

I recently had occasion to review 138 cases of carcinoma of the oesophagus (including a number of my own) who presented at the Royal Melbourne Hospital over the ten-year period 1949 through 1959, and patients who had undergone radiotherapy treatment over the same period at the Peter McCallum Clinic, where I attend as Surgical Consultant to the Mouth and Throat Section (Dunlop, 1960).

Patients accepted for these series were sufferers from squamous carcinomata of the oesophagus with varying degrees of differentiation, except in the exceptional circumstances where adeno-carcinomata were regarded by pathologists as being of oesophageal origin.

Squamous cancers involving both the upper end of the oesophagus and the hypopharynx have been included.

Aetiological factors

The role of very hot, and irritant, swallowed substances remains quite conjectural. In this series, two associated pre-existing conditions have been prominent: chronic hypopharyngitis affecting the pharyngo-oesophageal junction, especially in women, and oesophageal hiatal hernia with reflux oesophagitis which is not infrequently associated both with adeno-carcinomata of the cardia, and squamous carcinomata usually of the lower oesophagus (Dunlop, 1956).

I have now encountered cancers of the cardia and oesophagus in association with oesophageal hiatal hernia in 22 patients.

Attention is drawn to the diagnostic difficulty in these patients where the sufferers themselves are conditioned to swallowing difficulties, and the wolf parades before the clinician in sheep's clothing. Even the macroscopic appearances at operation may be very similar.

General incidence

King (1936) reported that at the Royal Melbourne Hospital cancer of the oesophagus ranked sixth as a cause of cancer death. Halloram (1937) found that in New South Wales carcinoma of the oesophagus ranked fourth in frequency in males and was responsible for 4 per cent. of male cancer deaths.

Terracol and Sweet (1958) record that figures given for the relationship of carcinoma of the oesophagus to other malignant tumours vary from 4 to 18 per cent. In Victoria, in 1958, the incidence was approximately 2 per cent. of all cancer deaths recorded, and 14th in frequency. The main discrepancy appears to be due to inclusion of cancers of the cardia which involve the oesophagus. Cancer of the stomach remains the most common malignant tumour in Australia, and the incidence of growths of the cardia have been given by Willis (1953) as cardia 10 per cent., whole stomach 8 per cent., of the gastric sites.

Carcinomata of the stomach with upward invasion have in my hands been even more fatal than primary cancers of the oesophagus.

Thus my personal case series (as yet unpublished) embraces 114 upper end gastric growths with gross involvement of the oesophagus. 87 resections were carried out with seven survivals of five or more years up to the present time.

TABLE I

CARCINOMA OF THE OESOPHAGUS AND CARDIA
PATIENTS SEEN JUNE 1946 TO JUNE 1960

Site of carcinoma	*Number of Patients*	*Number of Resections*	*Percentage Resected*	*Survivors to present*	
				2 years	*5 years*
Oesophagus	180	125	69	26	18
Cardia	114	87	76	12	7
Both sites	294	212	72	38	25

Ellis and co-workers at the Mayo Clinic (1959) also stress the greater intractability of adeno-carcinomatous as opposed to squamous lesions of the oesophago-gastric junction.

Age and sex incidence

As shown in Table II the average age of all patients was 66 years, as compared with the British Empire Cancer Campaign report of 1942 (65 years) and Willis (1953) (67 years). As reported by Mustard and Ibberson (1956) in Toronto the females presented slightly earlier than males.

TABLE II

CARCINOMA OF THE OESOPHAGUS

Age

Sex	*Average age*
Males	67
Females	65
Both Sexes	66

The disparity between male and female gross incidence does not appear to be as great in Australia as in some other countries. As a sample, registered cancer deaths in Victoria in 1958 recorded males 56 per cent., females 44 per cent., per 100 oesophageal cancer deaths.

The equality of the sexes in this series, however, reflects some special interest in the upper oesophagus with the higher proportion of females elaborated in Table IV.

TABLE III

CARCINOMA OF THE OESOPHAGUS

Sex

Sex	*Number of Patients*
Males	90
Females	90
TOTAL	180

TABLE IV

CARCINOMA OF THE OESOPHAGUS

**Site Distribution*

Sex	*Lower Third*	*Middle Third*	*Upper Third*
Male	26	32	32
Female	12	35	43
Both Sexes	38	67	75

* Determined by oesophagoscopic level.

If all cases are considered, including those beyond surgical exploration, it is found to be easier to divide the oesophagus into thirds according to the oesophagoscopic level commencing with 15 cm. at the oesophagopharyngeal junction: $15 + 8 + 8 + 8 = 39$ cm. (average female). Divided in this way (Tables IV and V), it is to be noted that the male age rises with anatomical ascent in the oesophagus whilst female age falls, and vice versa.

TABLE V

CARCINOMA OF THE OESOPHAGUS

Age and Site Distribution

Average age

Sex	*Lower Third*	*Middle Third*	*Upper Third*
Males	64	66	70
Females	69	66	61

The " abdominal portion of the oesophagus " is regarded as an entity obtained by dissection. At operation or autopsy, the thoracic oesophagus may be regarded as divided in the chest into three portions by the inferior pulmonary vein and the aortic arch.

The cervical oesophagus is well defined anatomically, but tumours may overlap at both ends.

Intractability

It becomes ever more apparent that oesophageal cancer is commonly a very intractable lesion occurring in patients of advanced age and poor physical condition. Major factors are the frequency of metastasis, direct, disastrous spread to vital structures, and what might be termed a striking malignant potential of the entire oesophagus in those afflicted by tumours.

The incidence of lymph node metastasis is recorded in Tables VI and VII, and was obtained from cases with definite clinical operative or autopsy findings and excluding those providing no opportunity for assessment.

TABLE VI

CARCINOMA OF THE OESOPHAGUS

Lymph Node Metastasis

Group	*Nodes involved*	*Nodes uninvolved*
Males	75%	25%
Females	64%	36%
All Patients	70%	30%

TABLE VII

CARCINOMA OF THE OESOPHAGUS

Lymph Node Metastasis

	Nodes involved	*Nodes uninvolved*
Lower Third	59%	41%
Middle Third	70%	30%
Upper Third	75%	25%

The clinical finding of right supraclavicular nodes suggests oesophageal cancer. The nodes from cancer of the cervical oesophagus must be sought not only in the deep cervical nodes, and the para-tracheal regions, but in the mediastinum. In the latter regions recurrent nerve palsy may bear witness to their presence.

It will be noted in Table VI that the female incidence of lymph node involvement is lower in this series, and this may accord with better survival. Two-thirds of 21 survivors of more than three years after operation were females.

It has been most apparent that nodes may be involved beneath the diaphragm from tumours above the mid-oesophagus.

In 138 patients of the 10 years series at the Royal Melbourne Hospital, there were five patients with " double carcinomata " and seven more with adherent lymph nodes re-invading stomach or oesophagus at lower levels.

Cases were described of freak extensions of tumour tissue, and outriding tumour nodules very many centimetres from the main tumour, and of recurrence of tumour at or above the anastomosis after what appeared to be a more than adequate margin of excision (e.g. a margin of 6 cm.).

Concerning the malignant potential of the whole oesophagus, some most interesting observations were made by Gillesby *et al.* (1959), in injections of the submucous layers of the dog's oesophagus with Indian ink. The downward movement of particles was notable, but the most remarkable feature was the mechanical streaming of particles with the act of deglutition. Very possibly, cancer cells in the tumour subject are similarly thrust along in the swamp of the lymphatic plexus.

Very likely in some cases there are multi-centric origins of cancer, e.g. one case of carcinoma of the pyriform sinus followed by cancer of the mid-thoracic oesophagus. Scanlon *et al.* (1955), in scarifying segmental resection, stated that they had analysed a series of 79 cases who had undergone resection of squamous oesophageal tumours and found that no less than 45.6 per cent. had inadequate longitudinal removal of tumour.

This has been further stressed by Watson *et al.* (1956), Boyd *et al.* (1958), and Ellis *et al.* (1959). Garlock and Klein (1954) noted in Torek oesophagectomy survivers a 40 per cent. recurrence of malignancy in the oesophagostome.

It must at least be accepted that the margin of excision should be wider than has been current practice.

My own objective has been to approach the lesion as if it were situated at least one-third higher than the actual site. In particular, where it is indicated supra-aortic anastomosis adds far more to survival than to mortality.

THE TREATMENT OF PATIENTS
(Personal Series)

X-ray therapy

Only eight patients in this series (seven in the cervical region) were treated initially with deep therapy with curative intent. None of these obtained any substantial period of relief and the palliative effect was not striking. Resections were carried out later in three cases, one of whom is well in the eighth post-operative year.

Palliative deep therapy was given to a few others with advanced lesions beyond any curative surgery. Eighteen patients with residual malignancy following surgery received treatment, and one such patient has gone on to five-year survival in good health.

Surgery

In the main, the policy has been to resect widely in all cases where such a procedure was feasible, as evidenced by Tables I and VIII (resection rate 69 per cent.).

TABLE VIII

CARCINOMA OF THE OESOPHAGUS

Treatment

Type	*Number of Patients*	*Percentage*
Palliative	55	31%
Resection	125	69%

Age, frailty, and conditions of forbidding risk have not themselves debarred patients from resection where it seemed the only solution.

With increasing confidence in methods evolved to restore swallowing by intubation, and by-pass procedures, the trend has been towards increasing restraint in the treatment of really bad risk patients with formidable tumours, so long as they can be afforded reasonable comfort to face decline and death. Present views as to case selection and management will be summarized below.

Palliative procedures

TABLE IX

CARCINOMA OF THE OESOPHAGUS

Palliative Procedures

Procedure	*Number of patients*
*Intubation	25
*Gastrostomy	14
*Jejunostomy	1
Short Circuit	8
Oesophago-gastrostomy 3	
Oesophago-jejunostomy 5	
Tracheostomy	2
Oesophagoscopic dilation only ..	5
TOTAL	55

*Intubation in some after gastrostomy and vice versa.

Intubation. Symonds (1887) described a method of treatment of malignant strictures of the oesophagus by " tubage or permanent catheterism ". Interest was revived by Souttar (1924), whose flexible spirally twisted tubes are still in use. Allison (1949), Ravitch *et al.* (1952), Brown (1949) and Heimlich *et al.* (1956) have reported upon the use of endoluminal tubes.

In 1950, I commenced using plastic tubes (Dunlop, 1952), a preference soon emerging for polyvinyl chloride (" Portex "), a flexible plastic which hardens slowly in the body (Fig. 2). The range of portex tubes supplied as intra-tracheal tubing sets provides adequate range, and Mr. Wellington of the Facio-Maxillary Section of the Department of Plastic Surgery of the Royal Melbourne Hospital has attached the flanged bases. We have employed both round and oval flanges (the latter for higher levels of the oesophagus or hypopharynx).

We have used both hard (acrylic) and soft (polyvinyl chloride) flanges attached by a " P.V.C. glue " of polyvinyl chloride dissolved in cyclohexanone and acetone 3 : 1. (In a similar way we have evolved a larger

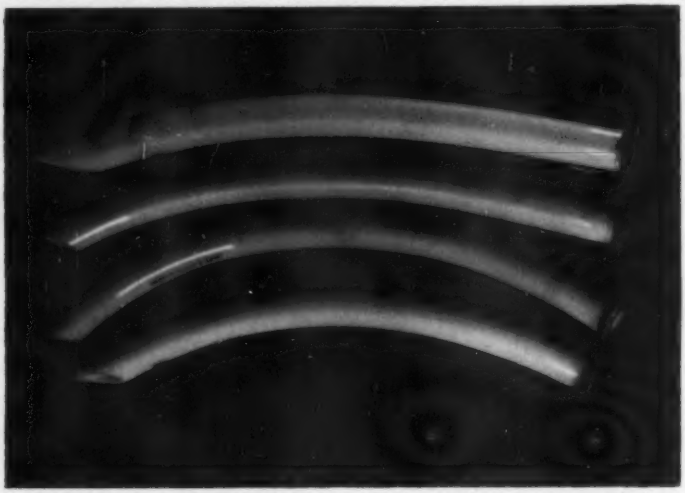

Fig. 2. Assortment of polyvinyl chloride plastic tubes for intubation. The large tube is used as a " former " wrapped in split skin after pharyngo-oesophago-laryngectomy.

tube of polyvinyl chloride with a soft moulded base attached, as used to make a " former " bearing a skin graft as a replacement after pharyngo-oesophago-laryngectomy (Dunlop, 1952, 1960).)

These tubes have great advantages:

(i) They provide a wide range of size and the length can be trimmed to requirement.

(ii) They fit closely with a suction effect.

(iii) Unlike the hard metal tubes they do not appear to cause necrosis and thus ulcerate their path onwards.

(iv) The smooth inner surface does not snare vegetable and animal fibre like the mesh of Souttar tubes.

J. K. B. Waddington (1957) described a polythene tube with similar features.

Twenty-five patients in this series were treated by intubation upon one or more occasions.

As most of these tubes are too large even for passage through the large negus oesophagoscope, the usual technique is as follows: The oesophagoscope is passed, and the stricture dilated. A smaller guide bougie of gum elastic is left *in situ*, the oesophagoscope is withdrawn, and the tube is threaded on the guide bougie, and " chased " down by the oesophagoscope into position.

For the upper end of the oesophagus, a Magill long-bladed laryngoscope, as used by anaesthetists, provides a roomy aperture for similar manipulations.

There are dangers of perforation in these manoeuvres. This is more apt to result from inability to find the correct channel with the dilating bougies. No force should be used.

Once the channel has been negotiated, it is better to repeat the intubation at a later date, employing a larger tube, than to overdo the initial stretching.

One patient in this series died during the week after intubation under circumstances suggesting possible mediastinal infection, though proof was not afforded.

If, during an operation, adequate excision of a tumour does not seem feasible, it may be possible to achieve a satisfactory intubation by aiding endoscopic manoeuvres by external guidance in the operative field.

Whilst the tubes can be introduced from an incision in the oesophagus after the fashion of Mackler and Mayer (1954), this is rarely necessary, and it seems unnecessary in most cases to operate simply to achieve intubation.

In most cases, tubes are well tolerated, and permit a fairly varied diet. Occasional patients vomit or regurgitate tubes upward to cause irritation and discomfort.

In general, the tubes function much better in the middle two-fourths of the oesophagus. Towards the upper end, they may cause laryngeal irritation and even oedema and stridor.

If introduced through the cardia, they are often difficult to imbed properly in the stricture. They appear to be thrust up by impinging against malignant tissue in the stomach rather than taking the long axis of the organ. Further, free regurgitation may cause discomfort.

In most cases, the type of patients treated by intubation do not live very long. One patient of 81 years lived in fair comfort for 10 months with the aid of these tubes.

Short circuits. These have great palliative value as a planned procedure in cases unsuitable for excisions, and where intubation is unsuccessful. They have great additional value as a compromise procedure when exploration reveals a state of affairs where excision is impracticable.

When the stomach has been mobilized for right thoracotomy, after the fashion of Lewis, as a palliative procedure the stomach may be drawn up and the fundus anastomized above the growth side to side as Tanner

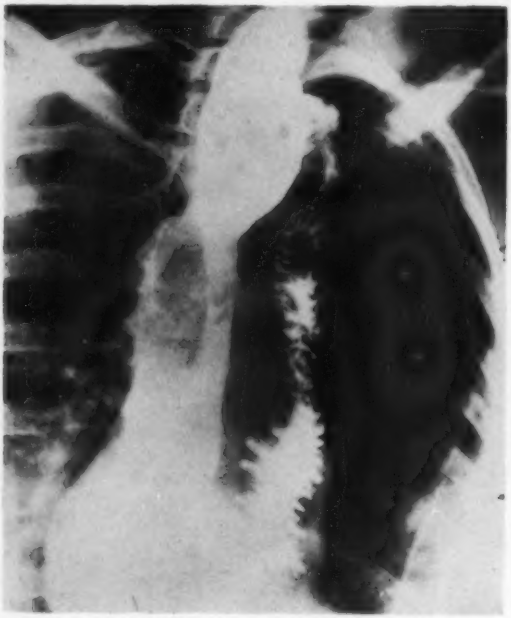

Fig. 3. X-ray photograph of retro-sternal short circuit with a loop of jejunum brought up to the pharynx.

advised (1947). Out of three patients so treated one patient died of a pulmonary infarct. Illustrating the palliative effect, a very elderly lady, who was a doctor's mother, despite invasion of a bronchus by tumour, was able to eat a chop on the day before her death, four months after operation.

Five patients were treated by oesophago- or pharyngo-jejunostomy, the short circuiting Roux loop being mobilized up the retro-sternal tunnel (Robertson and Sargeant, 1950) (Fig. 3). One patient died following an unfavourable anaesthetic reaction. Another developed stenosis at the anastomotic site which was thought to be due to mild terminal necrosis

of the loop. In cases of carcinoma of the cardia 13 oesophago-jejunal by-pass procedures were carried out. One patient lived in fair comfort for 16 months. One post-operative death occurred.

On one occasion a tube based on the greater curvature of the stomach was used to by-pass the obstructed cardia. The patient swallowed well for six months before his demise. Thus the overall mortality for short circuits in these frail sick " inoperable " subjects was 14 per cent.

Following a good deal of experience with jejunal loops in both malignant and non-malignant conditions it must be stated that these long loops are somewhat precarious in their blood supply, especially in these old debilitated subjects, and this is related perhaps more to interference with venous return than arterial blood supply.

The colon has a safer blood supply, and currently the right colon is gaining popularity. There is normal peristaltic activity with the caecum mobilized up the retrosternal tunnel to the neck, and the anastomosis to the stomach can be made at the same operation to preserve gastric digestion. Examples of protagonists are Scanlon and Staley (1958), Neville and Clowes (1958) and Petrov (1959). The left colon has also been used in an anti-peristaltic direction after the method of Goligher and Robin (1954).

Gastrostomy and jejunostomy

Joll (1940) said in connection with obstructing cancers of the upper end of the stomach, " I do not like the operation of gastrostomy or jejunostomy in inoperable gastric cancer since the period of survival has, in my experience, been very short, and the relief of suffering problematic ". This judgment still is appropriate to obstructing growths of the oesophagus or cardia since the stagnant secretions still accumulate above the site of obstruction.

It is difficult to avoid entirely these procedures especially with cervical carcinoma. If they are carried out, the simplest procedure such as exemplified by the Senn gastrostomy, is the best in those cases. It can be easily done with local anaesthetic, through a small incision. The combination of gastrostomy and tracheostomy is most intolerable, and even palliative excision should be easily preferable.

A brisk intravenous regime is in most cases preferable to preliminary gastrostomy. The improvement obtained in this way does not usually warrant the time expended. As an alternative I have sometimes carried out intubation at the time of oesophagoscopy and biopsy in highly obstructed cases likely to need resection after suitable preparation.

Palliative resection

Many authorities prefer to separate in their resections patients in whom excision is not considered adequate, and malignant tissue is necessarily left behind. Certainly it is an advantage in presenting mortality figures.

Sometimes these palliative resections are deliberately planned as, for example, in the case of advanced carcinoma in the cervical oesophagus with both obstruction to swallowing and breathing, and failure to afford relief by any simpler measure. It may be helpful in such a case to excise the lower pharynx, and cervical oesophagus, to replace them with a tube bearing a skin graft, and establish a tracheostomy.

It may be, however, that they result from circumstances referred to by Joll (1940): "The surgeon who does his duty and seeks to resect every case in which there is a reasonable hope of extirpating the disease must inevitably encounter some instances in which the scope of operation has to be increased to meet the need to encompass a wider area than at first appeared necessary, and thus what appeared at the outset a reasonable risk proved eventually to be a forlorn hope."

Occasionally, as described (Dunlop, 1960) in a case in which there appears to be no hope of cancer clearance, in some remarkable way long term relief or cure appears to result.

Sweet (1954) has referred to this anomaly. As a general principle, however, success is likely to attend wide excision at an early stage, but we must resist the temptation to persist with excision where it is obviously inadequate, and fraught with risk. There is usually a point of return at which the operation can be stopped in time to revert to intubation, short circuit, or other palliative measure.

Tracheostomy

This procedure unfortunately sometimes becomes necessary for urgent dyspnoea caused by cancers of the cervical oesophagus. Wound infection and unsuitable incisions may prejudice reconstructive surgery after excision of the tumour, so that tracheostomy should be avoided if possible or, if unavoidable, established with great care. Combinations of tracheostomy and gastrostomy tax morale severely and render difficult independent existence outside of a hospital or nursing home.

RESECTIONS

Operative approaches

Left "chest". Many have followed Torek in the use of the left chest for exposure of the oesophagus. The easy mobilization of the stomach is facilitated by additional abdominal exposure. Some employ separate incisions which may be used to zone activities of synchronous combined teams, but I prefer the extension across the costal margin (abdomino-thoracic).

When supra-aortic measures are required, there may be inadequacy of exposure at one or both extremities of the field without free division of ribs, but this can be overcome by resecting more than one rib, leaving a bridge of chest wall in between.

In my practice, the left abdomino-thoracic incision is the one of choice for cancers of the cardia involving oesophagus, and I have employed it

TABLE X

CARCINOMA OF THE OESOPHAGUS

Operative approach. Resections

	Operative Approach		*Number*	*Total Number*
Cervical	Cervical oesophagectomy (leaving larynx)		5	
	Pharyngo-oesophago-laryngectomy	Wookey	13	
		Plastic tube with skin graph	15	33
Left Chest	Torek		1	
	Left thoraco-abdominal and left thoracic	Infra aortic	40	
		Garlock transposition	5	46
Right Chest	Abdominal and right postero-lateral (Lewis)		34	
	Abdominal and right antero-lateral		2	
	Abdomino-thoracic		2	38
Neck, chest and abdomen		Oesophago-gastric	4	
		Oesophago-jejunal	4	8
		TOTAL ..		125

for cancers of the oesophagus at the lower third, usually resecting the seventh rib.

It would appear in retrospect that long-term survival would be improved by taking the resection level up to above the aortic arch, and this is more easily done from the right side.

Whilst Garlock and Klein (1954) have demonstrated down the years the facility with which the oesophagus can be transposed around the aorta, and Allison (1949) has described the mobilization of the arch itself, should it be necessary, it is true nevertheless that it is a " blind " procedure with occasional difficulty. I have found that human frailty is such that all too often the surgeon contents himself with the anastomosis that he can just make without the pain of " crossing the Rubicon " of the aortic arch, and then looks at the margin of clearance in the resected specimen with concern, which is so often subsequently justified by this most miserable failure, with return of dysphagia. In such a case it would be wiser to transpose and resect more oesophagus (Fig. 4).

The 46 left chest resections in this series would be less in number if " hind sight " had prevailed.

Out of the five Garlock transpositions carried out, three were necessitated by the upward spread of cancer exceeding the expected level.

The right "chest". This approach has long been favoured by most British surgeons, and there is the supreme advantage of a superbly unimpeded approach to the oesophagus, once the slender barrier of the azygos vein is divided. It permits easy suture high in the chest, with little worry as to dissection below, owing to the previous abdominal mobilization, and the ease of exposure.

Fig. 4. Photograph showing excised specimen of mid-thoracic oesophageal carcinoma. A wide margin of excision was achieved.

The criticism of mobilization of the stomach, before the operability is determined in the Lewis approach, can be answered by the fact that effective palliation is provided by short-circuiting an inoperable growth by suture of the gastric fundus to oesophagus above the obstructed level.

Right abdomino-thoracic. Right abdomino-thoracic incisions have been demonstrated to be of extreme value by Nakayama (1954, 1959) and might well be used extensively for the lower oesophagus at least. I have personally used them in only two cases in this particular series, because *firstly* the overhang of liver and costal margin is a slight inconvenience in dissecting the paracardial and left gastric nodes and mobilizing the

upper stomach, and *secondly* fairly extensive rib resection is necessary, even with these large wounds, to give ease of access at both ends, as required for high resections.

Right antero-lateral. The right antero-lateral incision has considerable appeal and, as well as in two cases under " Right Chest ", it was used for oesophago-gastric anastomosis in the neck, chest, abdomen group. It is a most useful approach to high cancers of the thoracic oesophagus. The third right intercostal space is opened along an incision back into the axilla, and adjacent ribs and costal cartilages are divided as necessary.

The patient remains in the supine position, but the table can be tilted. The key exposure of the azygos vein crossing the oesophagus is easily made. Abdominal exposure is readily obtained without change of posture and the mobilized stomach can be handed up to the chest, and then, if necessary, with a cervical incision, relayed on to the neck. Right chest anastomoses tend to fall snugly into the mediastinum, rather than being pushed out by the aortic arch.

Neck, chest and abdomen. For operable growths in the upper third of the oesophagus, I prefer the above antero-lateral incision in the right chest, with the patient lying on his back. If required, the stomach can be mobilized and handed up to the chest, and similarly from chest to neck if thought to be necessary. Retreat can be made early in inoperable cases by resort to intubation, or bowel can be used for short circuit by the use of the retro-sternal tunnel. (Loops of jejunum in the pleural sacs have been found prone to twists and rotations which can be disastrous.) Sternal splitting incisions were used in two cases of upper oesophageal cancer, but the exposure was not impressive and in one case it was augmented by swinging the incision well out laterally to open the right pleural sac.

Waddell and Scannell (1957) have since described a sternal splitting approach together with division of the left innominate vein. This may find application in some cases where neck approaches prove a little inadequate. When following resections for growths at the base of the neck, a conduit is required to the abdomen, the retrosternal tunnel serves very well to transmit a length of bowel. I have used jejunum with one exception in which, following necrosis of such a loop, colon was then employed.

I have been accustomed to complete the interposition of jejunum at a second stage, by division of the Roux loop, anastomosis to stomach, and a reconstitution at or near the T-JUNCTION. With an iso-peristaltic arrangement, I have not seen anastomotic ulcers arise, or trouble from reflux. The right colon usually appears to have a safer blood supply for these extensile procedures, and a primary interposition can be achieved, so that it merits more prominence in this series. I have been reluctant to adopt the method, because of distrust of colon bacteria, diffidence in

extending the scope of the operation from the head almost to the pelvis, and because of the extra bulk of some of these large bowels. In conditions in which the colon has been used, I have adopted the procedure of removing the appendix and making the anastomosis to the caecum itself.

An active gastro-colic reflex may persist after colon interposition, at least for a time. The anti-peristaltic arrangement usually attending the use of the left colon appears to be functionally unsound, and peptic ulceration might well occur. Usually the danger area with retro-sternal tunnels appears to be at the upper aperture which may be tight. This may be improved by excision of the inner third of the clavicle or some of the sternum. Care should be taken to see that the opening in the endothoracic fascia is adequate.

Interest has been created by Siedenberg *et al.* (1959) in the transplantation of a jejunal segment to the neck, revascularized by anastomosis to an artery and vein in the neck.

There are still too many uncertainties in such techniques, but thought should be given to this achievement in contemplating ischaemic bowel of doubtful viability.

Cervical. The first successful resection of an oesophageal cancer was achieved in the neck by Czerny (1877). Pioneers in this field in Great Britain include Evans (1933), Trotter (1913) and Colledge (1943). Negus (1950), Rob and Bateman (1949), Raven (1954), Owen (1950) and many others have contributed to our knowledge. Wookey (1948) in Toronto stimulated great interest by the success of the operation which bears his name. A major feature of our times has been the improvement in reconstructive methods, and improved speech training (pharyngeal speech). Rob and Bateman (1949) and Negus (1950) initiated interest in tubes or " formers " to fill the gap caused by excision and these tubes soon became used with split skin grafts, e.g. Edgerton (1952) (Tantulum mesh), Dunlop (1952) (plastic). Reference has already been made to eight patients, whose cervical cancers necessitated thoracic and abdominal components in the operation. The successful procedure described by Jack (1955) and developed by Yeoh and Cohen (1958), whereby the lower oesophagus was mobilized with the stomach for supra-aortic anastomosis, has not been used in this series. Possibly nodes in close proximity to the oesophagus are retained.

Conservative operations (retaining the larynx)

Trotter was the great protagonist of conservative resection, but the operation of lateral pharyngotomy has more application to the laryngopharynx than the oesophagus. On two occasions I have been able to achieve successfully resection of a segmental cuff of hypopharynx and oesophagus with primary suture. In the other cases, two were attempted Wookey type reconstruction, and one a replacement of cervical oesophagus with a grafted " portex " tube. Later jejunum was brought up in this latter case.

Pharyngo-oesophago-laryngectomy

The multi-staged Wookey operation with full thickness skin reconstruction has been employed in 13 patients. It has been found advisable to modify the Wookey flap. The corners are rounded off to form a tongue thrown across the neck, with the base on a mastoid process, and the midclavicle. In recent years I have given up the use of acromio-thoracic pedicles in reconstruction, and achieve external cover by rotation of large flaps and grafting of secondary defects. This type of reconstruction can be completed about eight weeks after the excision.

The great bugbear of failed completion of the plastic reconstruction, due to recurrence, can be avoided by proper case selection.

The use of " formers " bearing split skin has been shadowed by stricture formation after the tube is removed. I have not found this of great moment since adopting tubes of a type which can be worn comfortably by the patient for years at a time (Dunlop, 1960).

Further, the stricture can be relieved by re-introducing a suitable tube, and leaving it there for a long period.

Where operable lymph node metastases are present in these cases, they are almost always bilateral. They are best dealt with by means of a big **U** flap incision hanging from the mastoid processes and chin like a beard, which permits bilateral radical neck dissection, with sacrifice of jugular veins, together with pharyngo-oesophago-laryngectomy. In view of the bad prognostic outlook, tube replacement is preferred in such cases.

Operative mortality

Those who find the mortality of surgery forbidding should also give thought to the appalling mortality of the disease itself. In the 10 years series of the Royal Melbourne Hospital patients, of 36 who received no surgical treatment 41.6 per cent. died within a month, and of 33 for whom relatively trivial palliative operations were done, 42.4 per cent. died in the same period. The greatest cause of death in my patients has been post-operative pneumonia, which has been a major factor in 14.

Main causes of Post-operative death

Post-operative pneumonia	14
Gangrene and anastomotic leak	7
Cardiac	3
Pulmonary infarcts	3
Haemorrhage (secondary)	3
Dilatation of the stomach	1
Pneumothorax	1
Cerebral thromboses	1
	33

Post-operative pneumonia is most often lethal about the third post-operative day, but some patients weary of the battle to cough up their sputum and die much later.

No doubt more tracheostomies should have been done, and others done earlier or even prophylactically. Bronchoscopy at the bedside, with the aid of Zylocaine injected into the trachea, is helpful in the presence of the more dramatic lung collapse.

Cardiac failure may be associated with pulmonary oedema. Frequently these old patients fibrillate after thoracotomy, and digitalization, and the care of a physician, are essential.

Pulmonary infarcts, both of the dramatic type and those associated with septic infection and late death, have occurred. Attempts to avoid these with anti-coagulants have proved the sensitiveness of these old depleted, poorly nourished patients to these drugs, so that dangerous haemorrhages have occurred, causing death in one case in this series. Three secondary haemorrhages into the chest occurred. One of these followed a breach of the aorta and suture at operation.

After one experience of death associated with gastric dilatation of the necessarily vagotomized stomach, I have employed an indwelling tube through the anastomosis in all cases, and in addition have performed pyloroplasty or pyloromyotomy.

One patient with gross emphysema and bullous blebs on the lung died of pneumothorax despite upper and lower tubes in the pleural sac. A late death occurred from cerebral thrombosis.

Whilst the level of resection has a distinct bearing upon mortality it must be remembered that in this series at least the type of growths requiring high anastomosis have been very formidable and most commonly occurring in very elderly males.

TABLE XI

CARCINOMA OF THE OESOPHAGUS

Resection Mortality

Site	*Number of Resections*	*Operative Deaths*	*Percentage Mortality*
Lower Third	33	5	15%
Middle Third	47	17	36%
Upper Third	45	11	24%
TOTAL	125	33	26.5%

To my view supra-aortic anastomosis would add little to mortality in the tractable cases.

Survival

Smithers (1957) presented a collected series from 14 major centres who reported all their cases, treated and untreated, and of a mere 90 five-year survivors, 50 were surgical and 40 radiotherapeutic successes.

The large series of Sweet (1954) and Lortat-Jacob (1957) could not be included. I am indebted to Professor Lindskog (1960) for the following summary of seven large surgical series which are widely distributed. In surveying the original papers I have found difficulty in separating the tumours of the cardia.

TABLE XII

CARCINOMA OF THE THORACIC OESOPHAGUS AND CARDIA

Operative Mortality and Survival in seven large series
(Lindskog and Liebow*)

Surgeon	*Year of Report*	*Number of Cases Resected*	*Operative Deaths*	*Number of Survivors*		
				Immediate	*2-year*	*5-year*
Garlock	1954	180	57	123	27	11
Wu	1955	152	28	124	24	6
Sweet	1956	327	57	270	83	24
Petrov	1957	123	62	61	—	6
Lortat-Jacobs ..	1957	308	102	206	51	10
Nakaysma ..	1958	953	56	897	151	35
Ellis	1959	245	39	206	—	20
		2288	401	1887	336	112
			17.5%			4.9%

*Personal communication

This illustrates the rising though small band of surgical survivors.

Mustard and Ibberson (1956) record 381 patients at Toronto, of which eight (3 per cent.) survived five years, and Postlethwaite and co-workers (1957) refer to 253 patients with five (4 per cent.) surviving five years.

Garlock and Klein (1954) reported 12 patients with lower third growths and four with middle and upper third lesions who had reached five-year survival. Their initial mortality was one in three.

Adams (1955) of the Lahey Clinic published an uplifting record of 89 patients with 35 resections with nine five-year survivals.

Sweet (1954) recorded 17.5 per cent. five-year survival of resected cases with lower third tumours, but only 4 per cent. in the middle third, and none in the upper third.

Nakayama (1959) refers to 2,382 patients with cancers of the oesophagus and cardia: 953 resections, 5.8 per cent. mortality and 35 five-year survivors.

In my own series the operative results of cases treated by one or other type of resection are shown in Table XIII.

TABLE XIII

CARCINOMA OF THE OESOPHAGUS

Resection Level and Mortality

Resection Level	*Number*	*Operative Deaths*	*Percentage Mortality*
Cervical	33	4	12%
Supra-aortic	51	21	41%
Neck anastomosis	8	5	63%
Chest anastomosis	43	16	37%
Infra-aortic	40	8	20%
TOREK	1	0	0
All Levels	125	33	26%

Five-year survival can as yet be related to only 91 patients (Table XIV) with 18 five-year survivals, and 14 still living from five to 12 years (Figs. 5 and 6).

TABLE XIV

CARCINOMA OF THE OESOPHAGUS

Survival in Years

125 Patients submitted to resection, June 1946—June 1960
33 Post-operative deaths

Years	*Number of Patients*
1–2	40
2–3	26
3–4	21
4–5	19
5–6	18
6–7	15
7–8	12
8–9	10
9–10	7
10–11	4
11–12	3
12–13	1

14 still surviving 5–12 years
10 Patients untraced

There are now 21 survivors beyond three years, of which eight were lower third, eight middle third and five upper third resections.

Thus in this rather small group 20 per cent. of the patients presenting for treatment reached five-year survival.

Well-being of survivors

It has been claimed that the structural and physiological disorders attending these massive onslaughts on the body are incompatible with well-being. Such has not been my experience. It is a curious thing that most of the ills attributed to surgery really relate to the woes of uncured malignancy.

An oesophago-gastric anastomosis low in the chest may develop reflux with dyspepsia and more serious sequelae, as is the case with sliding hiatal hernia. When the stomach is brought high into the chest these symptoms do not appear to arise, though large meals may cause a little discomfort. All the long-term survivors in this series have been cheerful, of average activity, and extravagantly grateful.

The selection of treatment for patients

This involves great responsibility which is best shared by physician, surgeon, radiotherapist and anaesthetist.

We must be prepared to accept the fact that we are dealing with frail elderly people suffering from a disease which is usually incurable.

Effective palliation is therefore of major importance.

Sometimes neither radiotherapy nor surgery are practicable; but if dysphagia is grave, intubation may give comfort, both permitting nourishment to be taken and allowing secretions to pass on and not stagnate and spill to the airway.

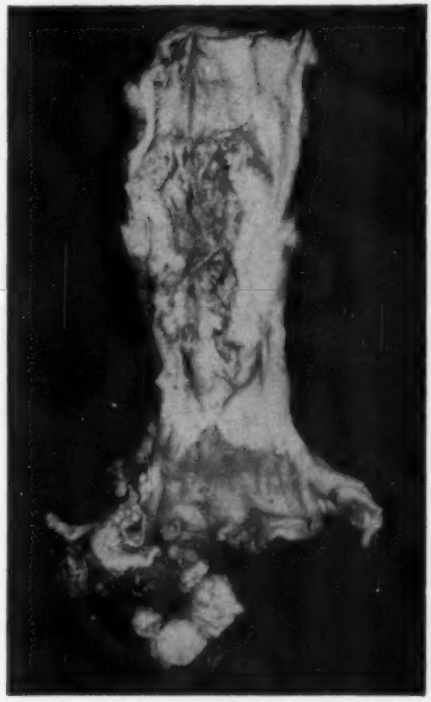

Fig. 5. Photograph of excised specimen of extensive widely invading carcinoma of middle and lower thoracic oesophagus. Heavy lymph node deposits both below and above diaphragm. The patient is well 10 years later.

An opportunity may be afforded for this to be done at oesophagoscopy and biopsy, and the presence of a plastic tube will not prejudice subsequent treatment by radiotherapy or surgery.

Very bad risk patients, and those almost certainly incurable

This group will include those who present with such signs of inoperability as fixed nodes in the supraclavicular triangle, a paralysed vocal cord, or bronchoscopic evidence of invasion of the trachea or bronchi.

Intubation may relieve the worst of these symptoms and make life tolerable. The prospects of relief in this way are poor with growths high in the cervical region.

Radiotherapy has some definite effect in extending life, and may improve swallowing.

The average survival of 32 patients suffering from squamous cancer of the oesophagus, treated at the Peter MacCallum Clinic, was seven months.

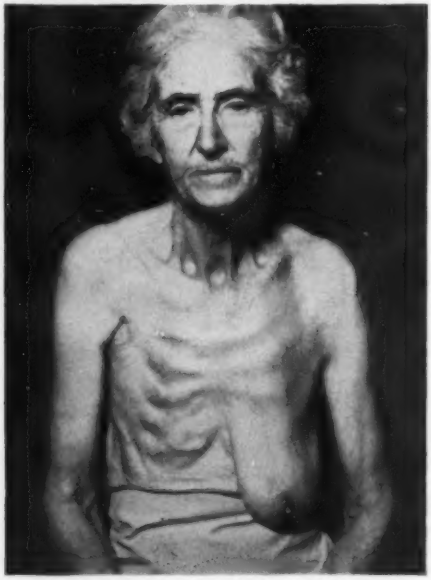

Fig. 6. Patient surviving in the 13th year after excision of a bulky carcinoma in the middle third of the oesophagus. She has more recently had a breast excised for carcinoma.

If relief is not afforded by these measures, short circuiting procedures and, in exceptional cases, palliative excision may be considered.

Radiotherapy may not greatly complicate surgery if carried out 6–8 weeks after the completion of the course.

Palliation of lower third growths by radiotherapy is doubtful, and surgery merits strong consideration. Cancers of the cervical oesophagus may make patients desperately miserable with dysphagia, stridor, and loss of voice. They may be happier with a new swallowing channel and an unimpeded air-way.

Patients possibly curable

There is the choice of radiotherapy or surgery, or combinations of the two.

Gütgemann and his associates (1954) are not very complimentary to either. They quote data from 33 surgeons. Operation was feasible in 35.8, mortality 41.4 per cent. Two-thirds of the patients afterwards lived more than a year and 4.3 per cent. were still living after five years.

After Roentgen therapy, 81–89 per cent. died during the first year.

In Melbourne, where radiotherapy is a well established science, and good super-voltage therapy is available, I know of no five-year survival after this form of treatment of oesophageal cancer. Hanson (1954) in South Australia described two five-year survivals, one middle third and one lower third. The former case lived for eight years in comfort before what Hanson regarded as another carcinoma occurred, and after further therapy she died in the tenth year.

There is a fairly widely entertained view that surgery is unequalled in the lower third, but becomes of doubtful application in the middle third owing to high mortality and low cure rate, and that it is inferior to surgery in the upper third.

Smithers (1957) compares Royal Marsden Hospital figures of 11.5 per cent. survival of treated cases in the upper third against no survival in this region in the cases of Sweet. This comparison quite overlooks the fact that Sweet's interest at the time centred almost entirely on the thorax, and that his results refer to upper third of the thoracic oesophagus.

A very different story arises from Toronto, where Mustard and Ibberson (1960) recorded the results of the Wookey operation: 44 patients, 14 per cent. mortality and five-year survivals 24 per cent. In a personal communication giving provisional results of the most modern radiotherapy it appeared that these results were most unlikely to equal surgery.

In my own series of all upper third cases (both thoracic and cervical) seen over five years ago, the record is: 40 patients, resected 24, with a five-year survival of 17 per cent. In the cervical oesophagus considered separately the survival was 22 per cent.

It is my opinion that there is no good case for abandoning surgery in the cervical region, and still less in the middle third.

However, as regards the region between the aortic arch and the base of the neck, surgery has not been very fruitful. If the omens are unfavourable or the patient a poor risk radiotherapy should certainly be tried. A good risk patient with an encouragingly early neoplasm should, in my opinion, be explored cautiously.

In the middle third it is submitted that radiotherapy is best reserved for patients who are unsuitable for major surgery.

It would, however, be an excellent thing if a trial were made of full irradiation followed by surgery, and possibly other combinations.

The skills and facilities available differ considerably in different areas.

We should be humbly conscious of the limitations of our methods, eager to accept assistance from others, and above all aware that every patient poses individual and human problems not solved by reference to anatomical sites, or statistics.

To return to Joll; one of the previous Joll lecturers (Frank Lahey) is remembered in his one-time operating suite by a plaque which testifies:

"The skill of the physician shall lift up his head, and in the sight of great men he shall be admired."

How true that was of Joll too!

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DURING THE LAST few weeks the following generous donations have been received:

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5s. 0d.	Miss Rose H. Thompson (further gift)

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McIndoe Memorial Fund

$10	Dr. A. E. Hiebert, M.D.

Donations and voluntary annual subscriptions by Fellows

The following Fellow of the College and Fellow in the Faculty of Anaesthetists have generously given a donation to the College or have undertaken to make a voluntary annual subscription under covenant:

I. R. Hadelmayr, F.F.A.R.C.S. D. O'Callaghan, F.R.C.S.

THE LISTER FESTIVAL

THIS TRIENNIAL FESTIVAL was held on 27th April 1961, being necessarily postponed for some three weeks after 5th April, which was Lord Lister's birthday.

The Lister Medal was formally presented to Professor Wilder Penfield, an Honorary Fellow of the College, at the close of the oration.

Special exhibitions of Listeriana had been arranged in the Exhibition Hall for the benefit of the many visitors who were in the College at the time of the Festival.

A dinner was held in the Edward Lumley Hall, with the President, Sir Arthur Porritt, in the Chair, and those present numbered 82.

The toast of "The Guests" was proposed by the President, who explained that there were two Guests, Professor and Mrs. Penfield, all the others present being hosts, including the Deputy High Commissioner for Canada, the President of the Royal Society, representatives of the Lister Medal Committee, the Hunterian Trustees, the Court of Patrons, and Lister's descendants as well as the Members of the Council and some of the College staff, all being accompanied by their ladies.

The President continued:

"'Let us now praise famous men.' We are here to-night to praise two—with almost a century between their achievements. Joseph Lord Lister, the protagonist of scientific surgery through his epic work on sepsis, and Wilder Penfield, the greatest philosophical and scientific neurosurgeon of our times.

"These two now become linked in a common paean of praise, thanks to the decision of Lister's innumerable friends and admirers, after his death in 1912, that there should be awarded every three years to perpetuate his memory a Lister Medal, and that the Medallist should give an address in London under the auspices of the Royal College of Surgeons. The choice of the Medallist was to be made by a committee representative of the Royal Society, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, the University of Edinburgh and the University of Glasgow, and this year's choice is our very welcome and very honoured guest, Professor Wilder Penfield. His magnificent address this afternoon—rich in thought, full of wisdom, and potent in prophecy—has placed him yet more firmly amongst the surgical immortals. How worthily has he established himself amongst the galaxy of previous Listerian Medallists—such men as Watson Cheyne, von Eiselsberg, Harvey Cushing, Charles Ballance, Robert Muir, René Leriche, Evarts Graham, Howard Florey, Geoffrey Jefferson, James Learmonth, Victor Negus and Stewart Duke-Elder.

"And now, Ladies and Gentlemen, what of these two men—our honoured friends, the one in retrospect, the other in person; friends of surgery, friends of humanity. I feel this is a personal occasion and I have no intention of giving you a lecture on their scientific and surgical accomplishments.

"Rather would I ask you to look on the portrait behind me and the honoured friend beside me! The Englishman who produced the acme of his work in Scotland and the American whose name will always be associated with Canada: two great internationalists!

"Let us look first at Lister, of Yorkshire and Quaker background, whose career started in Classics and Botany and who entered medicine in a manner that would not be possible to-day, taking the London M.B., the Membership *and* the Fellowship of this College in one year (1852). Before he left London he saw Liston operate on the first patient to be anaesthetized in this country! His first visit to Edinburgh and his connection with Syme are surgical history. He married Syme's daughter and ultimately returned to Edinburgh in 1869 to take over Syme's Chair of Clinical Surgery.

" But in the interim, for nearly ten years, he had been in Glasgow, as Regius Professor of Surgery. And it was here that he first heard of Pasteur's work on bacteria, that he first used carbolic as an antiseptic, that he published his first thesis on wound suppuration, its control and its treatment. Really Lister made no personal discoveries as such, but his scientific and clinical training made him acutely receptive of ideas which his practical genius and studious application allowed him to turn to such practical purpose that the whole vista of modern surgery was opened up, even ultimately the field so nobly filled by Wilder Penfield. His approach to problems is somehow very reminiscent of that of another great pioneer who followed in the tradition, Alexander Fleming. And in this connection we should remember that Lister observed and commented on the action of the mould Penicillium.

Left to right; Sir Stanford Cade, Senior Vice-President; Viscount Crookshank; the President; and Professor Wilder Penfield.

" Back in Edinburgh, and later at King's College Hospital in London, he developed his antiseptic techniques and applied them more and more widely. He was a member of the Council of this College from 1880 to 1886, being its Vice-President in 1886. He declined to stand for the Presidency, but was awarded that highest of all distinctions in this College, its Honorary Gold Medal. He had a long and close association with the Royal Family, being Surgeon to Queen Victoria in Scotland and later, in London, Surgeon to the Queen, and finally in 1900 Sergeant Surgeon. Made a Baronet in 1883, he was created a Baron (of Lyme Regis) in 1897, and in 1902 he was one of the first group of twelve to receive that greatest of all national Honours, the Order of Merit. In this same year he became a Privy Councillor. He was a fine figure of a man; he had a soft speech, often a slight stammer, a gentle smile but seldom laughed; an equable temperament and a courteous manner. He had simple tastes, loved home life, was intensely but never blatantly religious. Always he retained the Quaker ' Thee ' and ' Thou ' in speaking to friends. Look at his hands, square and thick with short fingers. He was a slow operator and sweated profusely if under tension—no uncommon happening in those days.

" A simple man, a great man, a man worthy of our perpetual memory.

" Now Professor Wilder Penfield—also a holder of the Order of Merit, also a Fellow of this College, a Fellow of the Royal Society (like Lister, who was its President from 1895 to 1900), the holder of innumerable degrees and honours and yet, again like Lister, supremely natural and unspoiled.

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THIS TRIENNIAL FESTIVAL was held on 27th April 1961, being necessarily postponed for some three weeks after 5th April, which was Lord Lister's birthday.

The Lister Medal was formally presented to Professor Wilder Penfield, an Honorary Fellow of the College, at the close of the oration.

Special exhibitions of Listeriana had been arranged in the Exhibition Hall for the benefit of the many visitors who were in the College at the time of the Festival.

A dinner was held in the Edward Lumley Hall, with the President, Sir Arthur Porritt, in the Chair, and those present numbered 82.

The toast of "The Guests" was proposed by the President, who explained that there were two Guests, Professor and Mrs. Penfield, all the others present being hosts, including the Deputy High Commissioner for Canada, the President of the Royal Society, representatives of the Lister Medal Committee, the Hunterian Trustees, the Court of Patrons, and Lister's descendants as well as the Members of the Council and some of the College staff, all being accompanied by their ladies.

The President continued:

"'Let us now praise famous men.' We are here to-night to praise two—with almost a century between their achievements. Joseph Lord Lister, the protagonist of scientific surgery through his epic work on sepsis, and Wilder Penfield, the greatest philosophical and scientific neurosurgeon of our times.

"These two now become linked in a common paean of praise, thanks to the decision of Lister's innumerable friends and admirers, after his death in 1912, that there should be awarded every three years to perpetuate his memory a Lister Medal, and that the Medallist should give an address in London under the auspices of the Royal College of Surgeons. The choice of the Medallist was to be made by a committee representative of the Royal Society, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, the University of Edinburgh and the University of Glasgow, and this year's choice is our very welcome and very honoured guest, Professor Wilder Penfield. His magnificent address this afternoon—rich in thought, full of wisdom, and potent in prophecy—has placed him yet more firmly amongst the surgical immortals. How worthily has he established himself amongst the galaxy of previous Listerian Medallists—such men as Watson Cheyne, von Eiselsberg, Harvey Cushing, Charles Ballance, Robert Muir, René Leriche, Evarts Graham, Howard Florey, Geoffrey Jefferson, James Learmonth, Victor Negus and Stewart Duke-Elder.

"And now, Ladies and Gentlemen, what of these two men—our honoured friends, the one in retrospect, the other in person; friends of surgery, friends of humanity. I feel this is a personal occasion and I have no intention of giving you a lecture on their scientific and surgical accomplishments.

"Rather would I ask you to look on the portrait behind me and the honoured friend beside me! The Englishman who produced the acme of his work in Scotland and the American whose name will always be associated with Canada: two great internationalists!

"Let us look first at Lister, of Yorkshire and Quaker background, whose career started in Classics and Botany and who entered medicine in a manner that would not be possible to-day, taking the London M.B., the Membership *and* the Fellowship of this College in one year (1852). Before he left London he saw Liston operate on the first patient to be anaesthetized in this country! His first visit to Edinburgh and his connection with Syme are surgical history. He married Syme's daughter and ultimately returned to Edinburgh in 1869 to take over Syme's Chair of Clinical Surgery.

" But in the interim, for nearly ten years, he had been in Glasgow, as Regius Professor of Surgery. And it was here that he first heard of Pasteur's work on bacteria, that he first used carbolic as an antiseptic, that he published his first thesis on wound suppuration, its control and its treatment. Really Lister made no personal discoveries as such, but his scientific and clinical training made him acutely receptive of ideas which his practical genius and studious application allowed him to turn to such practical purpose that the whole vista of modern surgery was opened up, even ultimately the field so nobly filled by Wilder Penfield. His approach to problems is somehow very reminiscent of that of another great pioneer who followed in the tradition, Alexander Fleming. And in this connection we should remember that Lister observed and commented on the action of the mould Penicillium.

Left to right; Sir Stanford Cade, Senior Vice-President; Viscount Crookshank; the President; and Professor Wilder Penfield.

" Back in Edinburgh, and later at King's College Hospital in London, he developed his antiseptic techniques and applied them more and more widely. He was a member of the Council of this College from 1880 to 1886, being its Vice-President in 1886. He declined to stand for the Presidency, but was awarded that highest of all distinctions in this College, its Honorary Gold Medal. He had a long and close association with the Royal Family, being Surgeon to Queen Victoria in Scotland and later, in London, Surgeon to the Queen, and finally in 1900 Sergeant Surgeon. Made a Baronet in 1883, he was created a Baron (of Lyme Regis) in 1897, and in 1902 he was one of the first group of twelve to receive that greatest of all national Honours, the Order of Merit. In this same year he became a Privy Councillor. He was a fine figure of a man; he had a soft speech, often a slight stammer, a gentle smile but seldom laughed; an equable temperament and a courteous manner. He had simple tastes, loved home life, was intensely but never blatantly religious. Always he retained the Quaker ' Thee ' and ' Thou ' in speaking to friends. Look at his hands, square and thick with short fingers. He was a slow operator and sweated profusely if under tension—no uncommon happening in those days.

" A simple man, a great man, a man worthy of our perpetual memory.

" Now Professor Wilder Penfield—also a holder of the Order of Merit, also a Fellow of this College, a Fellow of the Royal Society (like Lister, who was its President from 1895 to 1900), the holder of innumerable degrees and honours and yet, again like Lister, supremely natural and unspoiled.

" I am proud to claim him as a fellow Rhodes Scholar. His Scholarship was interrupted by the First World War, during which he served in France. We share too what I am sure he will agree was another privilege, that of working whilst at Oxford with Sherrington.

" Before going to Canada and becoming Canadian in the thirties, he was achieving fame both at Johns Hopkins in Baltimore and the Presbyterian in New York. But it is his epic work in McGill that has brought him world-wide renown, not only in neurosurgery, but in surgery as a whole. He is indeed a dedicated worker in the best and truest sense of the words. And it is a precious taste of the fruit of that work that we have been privileged to hear to-day.

" We are indeed grateful to you for a unique experience, and I can assure you that your presence here to-night—enhanced by the pleasure of your wife being with you—has brought us much joy. We esteem it a great honour that you should have accepted our invitation, and we hope you both will return often to visit your College."

Professor Wilder Penfield, in reply, expressed his deep appreciation and thanks for the honour done to him and the hospitality given to him. He said that during the President's speech he had discovered something in common between himself and Lister, who " sweated profusely if under tension ", for that had been his own experience in anticipation of to-day's events! The award of the Lister Medal was an honour which gave him the utmost gratification; but he also claimed it as a tribute to Canada, where he had carried out the work for which it was given, and to his associates who had helped and encouraged him.

He delighted his audience by saying that he enjoyed the hospitality of London more than that of any other place, for he had an immense admiration for the surgeons of London and their wives. Speaking of the importance of friendship, he feared that it was sometimes a feeling of defence, whereas friendship should be used in an offensive which would be of untold benefit to the world. Britain, he said, has the offensive of friendship and was greatly successful in it.

APPOINTMENT OF FELLOWS AND MEMBERS TO CONSULTANT POSTS

I. CHER, F.R.C.S.	Honorary Ophthalmic Surgeon, Prince Henry Hospital, Sydney.
N. McLEOD, F.F.A.R.C.S.	Consultant Anaesthetist, Perth General Hospital.
P. MAZUMDAR, F.R.C.S.	Surgical Specialist, District Hospital, Midnapore, West Bengal.
G. B. SMAILL, F.R.C.S.	Senior Orthopaedic Registrar, Wellington Hospital, New Zealand.

CEREMONY OF THE PRESENTATION OF DIPLOMAS

THE FOURTH ANNUAL ceremony of the presentation of diplomas was held on the afternoon of 7th June 1961. The Edward Lumley Hall was filled to capacity with diplomates and their relatives well before the time that the President and Council, preceded by the Mace, processed up the Hall. Also present were members of the Court of Patrons and members of the Court of Examiners and the Boards of each of the Faculties, each wearing the appropriate College gown, and the Presidents of the Royal Colleges of Surgeons of Edinburgh and Ireland (Professor John Bruce and Mr. N. A. Kinnear).

Fig. 1. Mr. T. A. Ogilvie being admitted to the Fellowship *ad eundem* by the President.

The President (Sir Arthur Porritt) commenced the proceedings by addressing the assembly with the following words:

" Ladies and gentlemen: This is an extraordinary meeting of the Council of this Royal College. It is held to allow us to present diplomas with due ceremony and in public. It is the only Council meeting in the year to which the public are admitted, and it is my first and very pleasant duty to welcome to-day's particular public because you are, being family and friends of our graduates, a very personal public. May I say how very delighted I am to see with us members of our Court of Patrons, who have done so much for this College, and also members of the Court of Examiners.

" The holding of examinations is one of the most important, if not *the* most important, functions and duties of this College. Through them we hope to maintain a standard of surgery which is second to none in the world, and at the same time we hope to give you, the laity, your surgical guarantee. Examinations are a necessary evil and they tend to be rather grim affairs full of stresses and strains, but examinations, like surgery itself, can be carried out with that human touch which means such a vast amount in times of trouble. This aim our Court, many of whose members are with us this afternoon, makes every effort to achieve, and while it is obvious that all to-day's diplomates will have nothing but praise for and appreciation of their examiners, I have every

reason to believe that those who are still waiting for such a day as this would equally pay tribute to the scrupulous fairness and consideration that they get from those fearsome beings 'on the other side of the table'.

"To-day, for those of you who are receiving your diplomas, means a number of hurdles successfully crossed, and on behalf of the Council and of the College I would like most heartily to congratulate you; but do not for one moment forget that a surgical life means that many obstacles still lie ahead which have to be surmounted. The joyous stimulus of to-day's success must be your spur and your incentive towards full justification, not only of your own abilities, but also of the faith of your examiners.

"We wish you well and we are delighted that this public acclaim should take place in the presence of so many of your relations and friends. We trust that they too will from now on count themselves as real friends of this College."

The first item on the Agenda was the admission to the Fellowship *ad eundem* of Mr. T. A. Ogilvie, F.R.C.S.Ed. (Fig. 1), to whom the President spoke as follows:

"Mr. Ogilvie: I am delighted to welcome you here this afternoon and even more delighted that we should be able to perform this ceremony in the presence of the President of your Mother College. May I say also that as another, a very humble and unworthy, graduate of your own University of St. Andrew's, I am delighted to admit another St. Andrew's graduate. We firmly believe that you have now crossed the Border for good. We feel, therefore, that it is right that you should get what we consider a very rare privilege, our Fellowship *ad eundem*, because we know that through the years that you have been working in the Colchester district you have not only performed your surgical duties with great credit to yourself and to those with whom you work, but that you have also taught undergraduates in a way which brings the highest commendation."

Then came the admission to the Fellowship of five practitioners of twenty years' standing, whom the President addressed as follows:

"Mr. T. J. R. Warren: We know that, like your predecessor whom I have just admitted, you are a Fellow of our Sister College of Edinburgh, and also of the American College of Surgeons, but we have felt that your magnificent work in foreign parts has justified this honour which we are delighted to award you. We have heard on so many sides of the magnificent work you have done in Brazil, in Sao Paulo, and your praises are sung so high that no honour could be too great for the work you have done.

"Sir Wilfred Fish: In this Hall it is a little difficult for me to speak to you, my teacher, my colleague and my friend. Here you are well known. As a former Dean of our Dental Faculty and as the originator and first Director of the Department of Dental Science you have made a niche in these great walls which will last for years and years. You have now come to greater heights, as President of the General Dental Council, and I feel that in honouring you we are honouring ourselves, but even more so we are glad to honour a friend.

"Professor R. A. Willis: As one Antipodean to another this gives me great pleasure. You are no stranger to this College either, and you are well remembered here as Professor of Pathology. We know that you have now gone to other fields, but we remember you here very well and it is very delightful to us to be able to recognize the the gift of surgery to pathology. It is a very great pleasure to us to admit you to our number to-day.

"Dr. L. Guttman: You and I have known each other for many years and there can be but few people in this Hall who do not know of the magnificent work you have done with paraplegics at Stoke Mandeville, not only returning a rather tragic part of the population to reasonable health, but returning them to reasonable occupation.

I have been particularly interested in that you have worked through the medium of competitive sport, which has been of the greatest advantage to your patients, and I think you must have reached the climax of your endeavour in this particular line when you were able to hold the Stoke Mandeville Games for paraplegics in Rome immediately after the Olympic Games. We all admire your work enormously and it is a very great pleasure to be able to admit you to-day.

" Group Captain A. L. Knipe: In this College we have a great appreciation of our link with the Services, but it is not that which brings you here to-day any more than your personality. We know perhaps more than you think of the work which you did so magnificently during the war, when you cared for those small parties that rushed back and forward across the North Sea in times of great difficulty and were not only their surgeon but their father. We know too that in the last ten or fifteen years you have continued to do first-class surgery for the Royal Air Force, and therefore it is a very great pleasure to be able to admit you to-day."

Replying on behalf of all the newly elected Fellows, Sir Wilfred Fish spoke thus:

" Mr. President, Members of Council, Ladies and Gentlemen: I am sure I speak for all the newly elected Fellows when I say how deeply we appreciate the honour of being admitted to the Fellowship. To those of us who have had the good fortune to be associated more closely with the College during its period of reconstruction, it is abundantly clear that the disaster of May 1941 was no more able to quench the spirit of John Hunter than to disintegrate his marble effigy that now adorns the new Exhibition Hall. Our pleasure is therefore twofold: we rejoice in being so closely associated with the great traditions and active elements of the College, and we find happiness and satisfaction of mind in the goodwill of those around us. We are particularly grateful that so many distinguished people should have been willing to make the sacrifice of time and effort to honour this occasion."

Sir Wilfred went on to describe the influence of the spirit of John Hunter on the life of the College to-day, particularly in the great programme of research which was being carried out in the laboratories.

The next item on the Agenda was the granting by the Council of diplomas of Fellowship to the candidates successful in the recent Final Examination, on the motion of Mr. A. Dickson Wright, member of Council and past Chairman of the Court of Examiners.

Members of Council and others who were to present candidates then left the dais and joined the parties of diplomates from their own medical and dental schools, who assembled at the back of the Hall. The diplomates walked in procession up to the dais, the Fellows and Members being presented to the President by members of Council and Court of Examiners, and members of the appropriate Board of Faculty presenting the Fellows and Licentiates in Dental Surgery (Fig. 2) and the Fellows in the Faculty of Anaesthetists.

At the request of the President and Council, Professor John Bruce, President of the Royal College of Surgeons of Edinburgh, then addressed the diplomates:

" Mr. President, Members of Council: It was characteristically generous of you that you should offer to the President of a Sister College the privilege of taking some part in this memorable occasion. For this distinction I am more grateful than I can say, and more than a little moved.

" To you young people now formally admitted to this great Guild—the greatest Guild of Surgeons in the world—I speak first the congratulations of all your senior colleagues, and their sincere word of God-speed and good luck. I need hardly remind you of your good fortune. For some, the way to this moment may have been more beset with obstacles than you care to recall: but to-day, for all of you, the magic casement has opened, and you are one with all those who have gone before in the proud story of this College, and one with the long line that will come after you so long as the art and the craft and the science of surgery shall endure.

Fig. 2. The President presenting Miss N. M. B. M. Coyle with her Licence in Dental Surgery, watched by Professor R. V. Bradlaw, who presented the Fellows and Licentiates in Dental Surgery from the Royal Dental Hospital. On the right of the picture can be seen Mr. Kennedy Cassels, the Secretary of the College, who announced each Diplomate as he or she ascended the dais.

" The roots of your College are deep in the past. Its leadership in the world of surgery, its contributions to the development of the surgical art, its zealous guardianship of the British surgical tradition, are as well known to you as to me. But as the heirs, as you are now, of this fine heritage, I would remind you briefly that Fellowship in it carries its obligations as well as its responsibilities.

" First, you have the duty of loyalty—abiding loyalty—to your surgical Alma Mater You must guard jealously the high repute your surgical ancestors have achieved for her. And you must be faithful to the example she has shown you in the search for new knowledge, while preserving all that is best of the past. The unique educational adventure so many of you have been privileged to enjoy is an experience that you would have sought in vain elsewhere. It is the fruit of the labours of many devoted hands and minds and hearts, the vision splendid of busy men who have spared neither time, nor energy, nor family, nor friendship, in their determination that each one of you who graduates from this place shall carry a hallmark that all men shall know, and respect, and trust.

" Many of you will scatter to the corners of the earth, and find challenge and opportunity and, sometimes, temptation, far from this place. But wherever your footsteps are stayed, you will each be known as a Fellow of the Royal College of Surgeons of England; and by your words and your deeds all men will know, not only you, but the place whence you have sprung. Those of you who go to other parts of the Commonwealth have a particular opportunity; for ours is a calling that takes heed neither of race, nor colour, nor creed. Medicine could be the cement that continues to bind that Commonwealth and its peoples together; and the unity of purpose and of achievement that brings men of different origins together in this Hall to-day could be the leaven that mankind is lacking.

" And, lastly, you must be true to the splendid discipline that is now to be your lifework. Many of us here to-day are nearing the end of our surgical road and envy you your opportunity. The surgical scene which will be around you for many years is an exciting and an inspiring one, possibly the most thrilling in the whole history of our surgical art, and you are fortunate to be going out well equipped for what is to come.

" I remember, many years ago, when I was no older than most of you, that in a reported speech the most renowned and the most oracular of the surgical aristocracy of the day asserted categorically that surgery had reached its zenith: there were no other fields to conquer. Ambroise Paré had said much the same thing 400 years before, and others have since succumbed to the temptation of gloomy prophecy. History has given the lie to all these forebodings. Remember always that ' our forefathers have done much, but they have not finished anything '.

" There are more than enough of problems for your generation to solve and to exploit. There is the challenge of cancer—and possibly a gleam on the horizon. There are the subtleties of organ and tissue transplantation; and much still to be learned of the precise impact of disease on the physiological and biochemical responses to surgery. These further quests are likely to lead us into deep waters—to the complexities of cell metabolism and structure, to the realms of enzyme chemistry, to the influence of the endocrine system on body function in health and disease.

" It is unlikely that these researches will have any far-reaching effects on surgical technique. What they will have is an important influence on surgical thought and surgical practice, for from them will emerge new concepts, not of the nature of the body responses in surgery, but of the vital cellular mechanisms through which these are mediated, of what might be called the cellular geography or the cellular economics of disease. New weapons of science such as the electron microscope and the ultracentrifuge, and new sciences such as histochemistry, tissue culture and electronics, have already opened new doors, and the world beyond is fascinating and exciting.

" You are well equipped for all this. You are well grounded in the basic sciences and in their application to clinical situations. You must see to it that you preserve your eager curiosity and cultivate a ' divine discontent ' if you are to detect and define the remaining chinks in the armour of surgery. You must retain a questing mind, and the experimental outlook of John Hunter, whose spirit broods, I think with contentment, over this place of surgical learning.

" And now I have one last word to say. The march of progress has left one thing unchanged and unchangeable. The ideal surgeon was depicted in the 17th century thus:

> " ' He must begin first in youth with good learning and exercise in thys noble arte, he must also be clenly, nimble-handed, sharpe sighted, pregnant witted, bolde spirited, clenly apparailed, pitefull harted, but not womenly affectionated to wepe or to trimble, when he seeth broken bones or bloodie woundes; neither muste he geue place to the crie of his sore Pacients, for soft chyrygiains maketh fowle sores. On the other syde, he maie not plaie the partes of a butcher to cutte, rende or teare the bodie of manne kynde. For allthough it be fraile, sore and weake, yet it is the pleasure of God, to cal it his Temple, his instrument and dwelying place.'

" Time has not modified this catalogue of surgical virtues. To-day, as yesterday, the good surgeon, though learned in the science of his subject, and skilled in all that pertains to the diagnosis and treatment of disease, must be a man of broad human sympathy, impelled by high ethical standards of conduct. For no matter how skilled in science, if you lack humanity, you are become as sounding brass or as a tinkling cymbal. And perhaps the challenge that awaits your generation is to retain, in the midst of so much science, the essential humanism of our art.

" We have no fear that in the years to be you will answer that challenge in a way that will make this College proud of you, her newest sons. And you go forth on your great adventure with the best wishes, the hopes, and the faith of us all."

At the request of the President, Sir Stanford Cade, Senior Vice-President, then proposed a vote of thanks to Professor Bruce:

" Mr. President, Members of Council, Professor John Bruce, Ladies and Gentlemen: Your applause, spontaneous and warm, makes it quite unnecessary for me to propose this vote of thanks. Nevertheless, Mr. President, I am most grateful to you that the opportunity of doing this should be given to me. To you who sit there in your new gowns, this address by Professor Bruce is a launching on your professional career. This address, with the usual graciousness and wisdom and elegance that one has learned for many years to expect from Professor Bruce, has drawn your attention to the art and the science and the craft of surgery. But what Professor Bruce has added by his personality to this address is the humanity of surgery, and I know no-one whom I would have preferred to launch me in my surgical career than the Speaker to whom you are fortunate to have listened to-day.

" Most of you are sitting here because of hard work, others have reached here by other routes, even harder work, but all of you would be the first to admit that the Goddess of Chance played some part in your wearing these robes to-day. In some, the part played by the Goddess of Chance was little, in others I would not like to speculate.

" But I am quite sure that all of you in the Hall to-day, diplomates and guests, will agree with me that the Goddess of Chance indeed was on your side when your President, with his usual knowledge of things of the world, selected the Speaker this afternoon. You have been launched on your surgical career, not only by a Master Surgeon, but a man on whose shoulders have fallen simultaneously two great burdens, the Regius Professorship of his University and the Presidency of his College. You have been addressed, not only by a Master Surgeon, the President of a College, and a Regius Professor, but you have been addressed by a great soldier, to whom the country and the great Generals in this last war have expressed thanks publicly for his self-sacrifice in Burma and elsewhere.

" So in years to come some of you will say, ' I was very lucky to pass successfully the examination,' but all of you will say, ' I was extremely fortunate that the address on the day of my Diploma Granting Ceremony was given by John Bruce.

" I carry out the task given to me by you, Mr. President, in proposing a vote of thanks to Professor John Bruce."

The President then closed the meeting and the Council withdrew in procession.

ANATOMICAL MUSEUM

IN THE ANATOMICAL MUSEUM during July there will be a demonstration of museum display techniques.

GRANT OF FELLOWSHIP DIPLOMAS

AT THE RECENT Final Examination for the Fellowship, nine candidates out of twenty-eight were successful in Ophthalmology, fourteen candidates out of twenty-five in Otolaryngology, and 116 out of 441 in General Surgery.

At an extraordinary meeting of the Council on 7th June, Diplomas of Fellowship were granted to the following:

*COGAN, John Farnon (*Manchester*).
ELTRINGHAM, William Keith (*Birmingham*).
COALS, John (*The London*).
GORTVAI, Peter (*The London*).
GARFIELD, John Samuel (*St. Mary's*).
LENNOX, William Murdoch (*King's College*).
AHMED, Nazir (*King's College*).
MUNRO, Alastair Ian (*King's College*).
JAJA, Millar Oboada Adafe (*Oxford*).
WILLIAMS, Bernard Norman (*Birmingham*).
McDERMOTT, Bruce Christopher (*King's College*).
SHARP, Malcolm (*University College*).
ATKINS, Paul (*King's College*).
MONTY, Cyril Philip (*King's College*).
MATHER, Barrington Sherwood (*St. Bartholomew's*).
VENABLES, Christopher Wilfred (*Westminster*).
*FRIEDMANN, Allan Isadore (*Witwatersrand*).
†McKENZIE, James (*Aberdeen*).
REDDY, Pannala Padma (*Osmania*).
†BANERJI, Sushil Chandra (*Lucknow*).
O'BRIEN, James Joseph (*Belfast*).
†WICKHAM, Henry (*Liverpool*).
HUSSEIN, Abdel Meguid Loutfy (*Cairo*).
†SHEAVES, Bruce Boyd (*Sydney*).
WILSON, Alastair Osborne (*Edinburgh*).
*DUGUID, Ian McIver (*Aberdeen*).
GAMMON, Veronica May (*Royal Free*).
STONE, John Francis (*Edinburgh*).
BROCK, Lawrence Gordon (*New Zealand*).
CHAKRABARTI, Saroj Bandhu (*Calcutta*).
THENABADU, Sugathadasa (*Ceylon*).
†ALUSI, Husni Abdul-Baki (*Baghdad*).
†GODDEN, John Lidington (*St. Bartholomew's*).
PEDUZZI, Remo Derek (*Middlesex*).
†SCHOFIELD, John Norman (*Middlesex*).
*SETHI, Baldev Prakash (*Calcutta*).
BANERJI, Nitya Sundar (*Calcutta*).
BHATTACHARYYA, Nirmalendu (*Calcutta*).
DE VILLIERS, Jacquez Charl (*Cape Town*).
JAYAWICKREME, Dunuvila Dayananda (*Ceylon*).
*JONES, Ralph Francis (*St. Bartholomew's*).
*MARTIN, James Herbert (*Melbourne*).
MINWALLA, Sorab Pestonji (*Bombay*).
NAKIB, Ali Hussain (*Baghdad*).
SEDDON, John Anthony (*Liverpool*).
†WILSON, Ian Irvine (*New Zealand*).
*CATFORD, Gordon Vivian (*Bristol*).
CURRY, Rodney Campbell (*Oxford*).
DEACON, Owen William (*Birmingham*).
HIRANANDANI, Narain Rewachand (*Madras*).

HUGHES, Walter James (*Sydney*).
MITTAL, Ram Piari (*Delhi*).
WONG, Peter Chee Nam (*Adelaide*).
ALBUQUERQUE, David Benedict (*Madras*).
CROSFILL, Martin Lawson (*St. Bartholomew's*).
DE CASTELLA, Hubert Cecil (*Melbourne*).
DUKE, Robert Francis Norman (*Oxford*).
DUTTA, Rajat Kumar (*Rangoon*).
GOSWAMI, Benudhar (*Calcutta*).
†GRANT, William James (*Dublin*).
JEFFERIES, John Dyment (*Bristol*).
KINGSMILL-MOORE, John Miles (*Dublin*).
MARRIOTT, Leonard Samuel (*Queensland*).
OSTERBERG, Paul Harald (*Dublin*).
PEARSON, John Brian (*Birmingham*).
†SELLICK, Richard James (*St. Thomas's*).
SMITH, John Wasley (*Adelaide*).
STOYLE, Thomas Frederick (*St. George's*).
CHRISTIE, Robert Harry Kenrick (*New Zealand*).
DE SOUZA, Wilfred Anthony (*Bombay*).
DOWNIE, Robin John Gordon (*Liverpool*).
DRINKWATER, John Brian (*Sheffield*).
FRASER, Warren Neil Cranston (*New Zealand*).
HENRY, Adrian Needham (*Dublin*).
KARUNARATNE, Gaminie Wickremarachchi (*Ceylon*).
†McKIM, Robert Stewart (*St. Thomas's*).
MADGWICK, John Colin Alexander (*The London*).
MADHAVAN, Kottayam Kadangode (*Gauhati*).
MAYNARD, John David (*Charing Cross*).
MILLROY, Peter John (*Queensland*).
MOORE, Charles John (*St. Mary's*).
NADGOUDA, Babu Gunderao (*Poona*).
†SHALOM, Albert Saimah (*University College*).
SIKAND, Prem Sarup (*Agra*).
TAPSELL, Peter Wilfred (*New Zealand*).
TODD, Ronald Stanley (*Liverpool*).
TRAPNELL, John Eliot (*Middlesex*).
ANAND, Makhan Singh (*Nagpur*).
ASHBY, Brian Sterry (*Westminster*).
CHANDRA, Ajay Kumar (*Calcutta*).
CHAUDHRI, Shailendra Mohan (*Lucknow*).
CHINCHANWALA, Gulamabbas Alimohamed (*Bombay*).
*COOPER, Bryan Paul (*Sydney*).
*CRAWFORD, Bruce Alexander (*Melbourne*).
DAS, Mriganka Mohan (*Calcutta*).
EADIE, Douglas George Arnott (*The London*).
GRIFFITH, Huw Bevan (*Oxford*).
HEYCOCK, Morris Hensman (*St. Thomas's*).
IBACH, Ernst Gerhard (*Witwatersrand*).
JOSEPH, Laji (*Madras*).
KAMDAR, Hasmukh Harilal (*Bombay*).
McINNES, Ian Edgeworth (*Melbourne*)
MEHTA, Narendrakumar Bakhtavermal (*Bombay*).
O'BRIEN, Mark Francis (*Melbourne*).
PRAKASH, Anand (*Lucknow*).
RABINOWITZ, Bernard (*Witwatersrand*).
ROSSWICK, Robert Paul (*The London*).
SINGH, Anant Prasad (*Patna*).
SUN, Clifford Kwai Kuen (*Hong Kong*)
WAHB, El Sayed Mohamed (*Cairo*).
WOODYARD, John Edward (*Bristol*).
YIU, Richard (*Hong Kong*).

AHMED, Roger Hanif (*Punjab*).
BLISS, Brian Peter (*Charing Cross*).
BURNS, Gerard Patrick (*Belfast*).
COOREY, Glen John (*Sydney*).
DOYLE, John Coundley (*Melbourne*).
MATHESON, Norman Alistair (*Aberdeen*).
MIDDLETON, Michael David (*Edinburgh*).
PATEL, Dinubhai Ambalal (*Baroda*).
RIEGER, Richard Anthony (*Adelaide*).
SOLANKE, Toriola Feisitan (*St. Andrew's*).
WYNNE, James Michael (*Cape Town*).
YACOUB, Ahmed Abdel Aziz (*Khartoum*).
AVRILLON, Joseph Raymond (*Dublin*).
CYRUS, Arthur Cecil (*Belfast*).
EDWARDS, Alan John (*St. Bartholomew's*).
HANANIA, Dawud Anastas (*St. Mary's*).
HUGH, Thomas Benedict (*Sydney*).
†LUDMAN, Harold (*University College*).
†McNEIL, Ronald Alastair (*Belfast*).
PRABHU, Nagesh Mukund (*Bombay*).
RAJANI, Manohar Radhakishan (*Bombay*).
ROBB, John Daniel Alexander (*Belfast*).
RUDICK, Jack (*Witwatersrand*).

Examination passed previously

ELEBUTE, Emmanuel Adeyemo (*Dublin*).

*In Ophthalmology. †In Otolaryngology.

PROCEEDINGS OF THE COUNCIL IN JUNE

AT A MEETING of the Council on 8th June 1961, with Sir Arthur Porritt, President, in the Chair, Mr. Isaac Wolfson was elected a Member of the Court of Patrons in recognition of his very generous gift to the College.

The following were co-opted to the Council for the year 1961–62, representing various branches of practice:

Ophthalmology	Mr. T. Keith Lyle, C.B.E.
Otolaryngology	Mr. C. Gill-Carey
Gynaecology and Obstetrics	Mr. H. G. E. Arthure
Anaesthetics	Professor W. W. Mushin
Dental Surgery	Professor M. A. Rushton
General Practice	Dr. John H. Hunt
Radiology	Professor D. W. Smithers.

All of the above are re-elections except in the case of Anaesthetics, where Professor Mushin, recently elected Dean of the Faculty of Anaesthetists, succeeds Dr. G. S. W. Organe, the retiring Dean.

Walker Prizes for their outstanding contributions towards the advancement of knowledge of the pathology and therapeutics of cancer during the period 1955–60 were awarded as follows:

(*a*) To Professor Charles Brenton Huggins, Director of the Ben May Laboratories, University of Chicago, in recognition of his sustained and distinguished contributions to cancer research over many years, particularly in the field of endocrine physiology. These contributions represent notable advances in the knowledge both of the properties of the cancer cell, and of the endocrine control of cancer in man, especially of the prostate and breast.

(*b*) To Dr. Ludwik Gross, of the Cancer Research Unit, Veterans' Administration Hospital, New York City, in recognition of the great importance of his contributions towards the understanding of the pathogenesis and experimental transmission of murine leukaemia, and especially his original and key discoveries in the field of the leukaemogenic and oncogenic viruses.

The Lady Cade Medal was awarded to Wing-Commander James Macconnell Urquhart, M.B., Ch.B., D.P.H., for his work in connection with industrial and operational hazards from radiation.

Surgeon Rear-Admiral D. D. Steele-Perkins, C.V.O., F.R.A.C.S., was elected to the Fellowship *ad eundem*.

The Jacksonian Prize was presented to Mr. Raymond Helsby, Fellow, of Liverpool.

The Hallett Prize was presented to Mr. T. N. Shanmugalingam, Fellow, of the University of Ceylon, who passed the Primary Fellowship Examination in Ceylon in 1956.

The Begley Prizes were presented to Miss Susan Kay of the University of Liverpool and Miss Rosemary R. Norton of Guy's Hospital Medical School.

Arising from a Report from the Committee on the Training of Surgeons, the Council decided, after discussion, that the Primary Fellowship Examination should continue to be entirely a postgraduate examination.

Paragraph 23 (*a*) of the regulations relating to the Final Fellowship Examination was re-drafted as follows:

> Candidates who have passed the Primary Fellowship Examination of the Royal College of Surgeons of England, or have been exempted therefrom (see paragraph 2), and have been engaged in the acquirement of professional knowledge for not less than three years subse-

quent to the date of having obtained a qualification specified in paragraph 1, are admissible to the examination on production of evidence of:

(*a*) (General Surgery) having served a period of postgraduate surgical training of at least two years in posts approved by the College, which must include the following:

(i) Twelve months in general surgery, of which six months must have been occupied in a resident post. A pre-registration post in general surgery will be accepted for six months of this period provided that it is recognized by the College for the purpose.

(ii) Six months in a full-time post with duties predominantly in a Casualty Department or Accident Service.

(iii) *Either* six further months in general surgery *or* six months in other surgical experience, e.g. orthopaedics, neurosurgery, urological surgery, thoracic surgery, plastic surgery, otolaryngology, ophthalmology, gynaecology, etc.

Arising from the Report of the Committee on Surgical Relations with Africa, it was decided to call a conference at the College to which shall be invited representatives of bodies interested in the provision of medical and surgical assistance to the less developed territories of the world in the fields of education, exchange of personnel and research.

The Council gratefully received from the League of Friends of the Royal Eye Hospital a further gift of £7,500 towards the endowment fund of the Research Chair in Ophthalmology.

Examiners for the year 1961–62 were elected.

A Diploma of Fellowship was granted to R. N. Gale.

One Diploma of Membership and One Diploma in Orthodontics were granted.

The following hospitals were recognized under paragraph 23 of the Fellowship regulations:

Hospitals	Posts Recognized		
	General (6 months unless otherwise stated)	Casualty (all 6 months)	Unspecified (all 6 months)
Penarth—Sully Hospital			1 Regr. (Thoracic) 3 S.H.Os. („)
Ipswich and East Suffolk Hospital (additional)			*Under para.* 23 (*c*) Regr. (E.N.T.) H.O. (E.N.T.)
London—Whipps Cross Hospital (additional)			*Under para.* 23 (*c*) Regr. (E.N.T.) S.H.O. (E.N.T.)
Chesterfield—Chesterfield and North Derbyshire Royal Hospital (additional)		Regr. (Orth.) 6 m. Cas.; 6 m. Orth.	

FACULTY OF DENTAL SURGERY

On Friday, 19th May 1961, the Board of Faculty of Dental Surgery held a luncheon at the College for Mr. John Brodribb Parfitt, F.D.S.R.C.S., and Mr. William Warwick James, O.B.E., F.R.C.S., F.D.S.R.C.S., in recognition of the contributions each has made to dental science, education and practice.

In addition to the Guests of Honour, there were present at the luncheon Sir Arthur and Lady Porritt, Professor Digby Chamberlain, Mr. and Mrs. F. W. Parfitt, Mrs. K. M. Rowlands, Sir Zachary Cope, Mrs. M. A. Rushton and Mrs. G. H. Leatherman.

Fig. 1. Mr. W. Warwick James receiving his script from the Dean of the Faculty, Professor Martin Rushton, C.B.E.

In proposing the health of the Guests of Honour, Professor M. A. Rushton, the Dean of the Faculty, said:

"Mr. President, Ladies and Gentlemen,

We are met to-day to do honour to two Fellows in Dental Surgery by election who in quite different ways have brought honour to our profession and who have come to occupy positions of quite singular esteem and regard in the minds of their colleagues and former pupils.

"*John Brodribb Parfitt*, who is the senior of the two, became a Licentiate of this College as long ago as 1893, a Member in 1896, and five years later was appointed an assistant dental surgeon to Guy's Hospital. His brilliant technical ability and good judgment were at once recognized, and his method of teaching advanced professional procedures by personal demonstration to small groups was so successful that these sessions have remained a lively memory with the many hundreds who ever attended them. I refer not only to students but also to practitioners at meetings of the British Dental Association, its branches and sections, to which he was an untiring contributor

"Like all good teachers, and more than most, he was never satisfied with his own knowledge. Did anyone offer a course of study in a branch of professional practice, immediately Mr. Parfitt would enrol, sitting in his characteristically humble way at the feet of many less than his equal, and always delighted to come away with some idea or technique that resulted from the experience.

"I will not enumerate his publications or do more than mention his book which has been so widely used by students. In his retirement, he has been able to maintain his wide interests in natural philosophy. He has held many high positions in the profession in his very active life and received many honours.

"To-day, in a more informal way, we have asked him to join us on an occasion which will be memorable to us all.

Fig. 2. Mr. Parfitt addressing the assembled company after receiving his illuminated script.

"*William Warwick James* became a Licentiate of this College in 1898, a Member in 1902, and a Fellow in surgery in 1905. He was appointed Dental Surgeon to the Royal Dental Hospital, to the Middlesex Hospital, and the Hospital for Sick Children, Great Ormond Street. He became, as we know, a most distinguished consultant, but above all he is known to us by his tremendous productivity in the fields of clinical and laboratory research. The list of his publications fills many foolscap sheets and covers an extremely wide range in surgery, pathology and anatomy: it starts with a contribution to the *Transactions of the Odontological Society* in 1906.

"A man of striking originality and independence of outlook, he was able to divest himself of the influence of any prevailing consensus of opinion, so that it often happened that the results of his studies came as a surprise and even a shock to his colleagues. Many of his papers have become classics which will always figure as landmarks in the development of our speciality. His books, whether on odontomes, on maxillo-facial injuries or on the comparative anatomy of the teeth and jaws, have consolidated and extended the knowledge available at the time of their publication.

" Awarded the John Tomes Prize nearly 40 years ago and an honorary M.Ch. at Birmingham University among other honours, he has long been recognized as one of the most outstanding figures in our profession. It is a great pleasure to us all that he has been able to join us to-day so that the past and present members of the Board can pay him this grateful tribute.

" On their behalf, I now desire to hand to each of these Fellows a small illuminated script which runs:

> ' Having regard to the outstanding contributions to dental science, education, and practice made by
>
> JOHN BRODRIBB PARFITT
>
> (likewise WILLIAM WARWICK JAMES)
>
> during a long life of professional service, the Board of Faculty of Dental Surgery of the Royal College of Surgeons of England has wished, at a luncheon held in his honour, to record its respect and admiration and its conviction that his example will long continue an inspiration to those who enter the Profession.' "

To this Toast Mr. Parfitt and Mr. Warwick James each replied, with a fluency and clarity much envied by their younger colleagues. Each paid warm tribute to the services rendered by the College to the dental profession over the past hundred years.

It was a great grief to the Faculty to learn of the subsequent death of Mr. Parfitt, on 12th June, at the age of 89. At the same time the Faculty felt glad that it had been able to give Mr. Parfitt what members of his family have since described as being, in his own words, one of the happiest experiences of his life.

R. S. J-G.

ELECTION OF FELLOWS TO THE BOARD OF FACULTY OF DENTAL SURGERY

THE ELECTION OF five Fellows in Dental Surgery to the Board of Faculty was held on Friday, 16th June 1961, in the presence of Mr. H. L. T. J. Hardwick and Mr. G. Loader, who acted as Scrutineers, Professor M. A. Rushton, C.B.E. (Dean), and Mr. G. H. Leatherman (Vice-Dean).

338 Fellows in Dental Surgery returned balloting papers, and the result of the Election was declared as follows:—

Sir William Kelsey Fry, C.B.E., M.C. Professor F. C. Wilkinson, C.B.E. Professor R. Cocker Mr. Alan Shefford, O.B.E.	re-elected
Professor G. L. Slack, O.B.E., T.D.	elected

In Memoriam

SIR GEOFFREY JEFFERSON, C.B.E., M.S., F.R.C.P., F.R.S., F.R.C.S. Hon. M.Ch., Hon. LL.D., Hon. Sc.D., Hon. F.R.C.S.Ed., Hon. F.R.C.S.I., Hon. F.R.F.P.S., Hon. F.R.A.C.S., Hon. F.A.C.S.
(1886–1961)

SIR GEOFFREY JEFFERSON, Emeritus Professor of Neuro-Surgery in the University of Manchester, died on 29th January in his seventy-fifth year. His death has removed one of the greatest figures in British surgery, a scientist, a man of letters, and internationally famous. In its long history, the Manchester Medical School has produced no one quite with his qualities of intellect, nor a personality more beloved.

Fig. 1. Sir Geoffrey Jefferson.

Geoffrey Jefferson, though born in County Durham, spent his early years in Rochdale, where his father was in general practice but also a surgeon to the Rochdale Infirmary. Geoffrey owed much to his parents. His father, Arthur John Jefferson, was a man of some distinction. His speech, his old-world courtesy; the black jacket and sponge bag trousers—every inch a south-countryman—he seemed at first sight to be in the wrong setting in a Lancashire industrial town. He was devoted to his working-class patients, and on his rounds time meant nothing to him. Geoffrey

inherited that same obliviousness of the passing of the hours. Geoffrey's mother was also a remarkable person who brought up a large family of two boys and four girls.

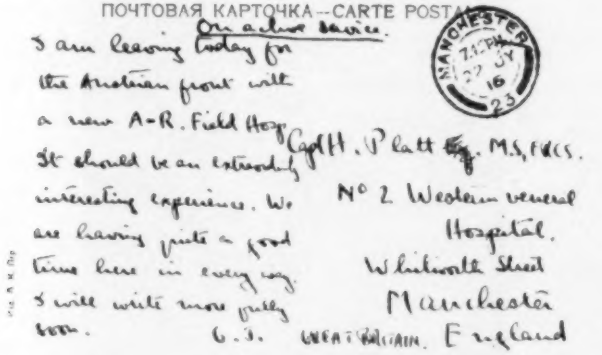
In such a home it was natural for Geoffrey to turn to medicine as a way of life, and in this choice he was followed by his brother, John Cecil Jefferson, and his eldest sister. Geoffrey Jefferson entered the Manchester Medical School in October 1904, coming from the Manchester Grammar School, where he had read classics. His undergraduate career was one of outstanding distinction in a year when the competition for prizes was keen. In the final M.B., B.S. examination of the University of London he gained honours and distinction in surgery. After the 2nd M.B., he had taken the Primary F.R.C.S. in his stride. The Final Fellowship was surmounted at the first attempt in 1911, and in 1913 he acquired the M.S., winning the gold medal.

His surgical training began with a year as House Surgeon to Professor G. A. Wright at the Manchester Royal Infirmary. Later he moved to London, to the Victoria Hospital for Children, and from there to the Cancer Hospital. This succession of posts was interrupted by a year as Demonstrator of Anatomy, where, under the influence of Professor Elliot Smith, his interests turned to neurology. In 1914 he left for British Columbia and married Dr. Gertrude Flumerfelt, who had been a medical student in Manchester. He settled in surgical practice in Victoria. It seemed then that he was lost to Manchester, but the outbreak of the First World War brought him back to Europe. At the invitation of Sir Herbert Waterhouse, who had been his chief at the Tite Street Children's Hospital, he joined the Anglo-Russian Hospital in Petrograd, had a tour of duty on the Austrian front (see Fig. 2), and with others experienced the opening phases of the 1917 revolution. Back in England he joined the Royal Army Medical Corps and was posted to No. 14 General Hospital, Boulogne, where he began the study of head injuries. On demobilization he returned to Manchester to look around before deciding whether to go back to Canada or not. Fortunately both the Salford Royal Hospital and the Grangethorpe Ministry of Pensions Hospital opened their doors to him, and the foundation of his brilliant career as a neurosurgeon was laid.

During the years between the two wars Geoffrey Jefferson worked unceasingly. It was an uphill fight to establish neurosurgery as an entity even after he was elected to the staff of the Manchester Royal Infirmary (1926), where, for many years, he had some eight beds only, scattered about the five surgical units, and the use of different operating theatres. It was not surprising that he accepted an invitation to join the staff of the National Hospital in Queen Square. This demanded fortnightly visits to London to see patients and to operate—a burden which should

never have been laid upon a man who had never enjoyed robust health. During that period he maintained a steady output of contributions to the literature; visited the United States to work with Harvey Cushing; founded the British Society of Neurosurgery—and so placed Manchester in the forefront of the world's centres of neurosurgery.

In the Second World War, after Hugh Cairns had joined the Royal Army Medical Corps, Geoffrey Jefferson became Consultant Adviser in Neurosurgery to the Emergency Medical Service of the Ministry of Health. This task involved much travelling—and called for all his resources—for trained neurosurgeons at that time were few in numbers. In 1939 the University had conferred Professorial status on him, the first chair in this subject in Great Britain. He held this chair until 1951, when he became Emeritus.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I am leaving on active service today for the Austrian front with a new A-R. Field Hosp. It should be an extremely interesting experience. We are having quite a good time here in every way. I will write more fully soon.
G. J.
Capt H. J. Platt Esq. M.S., F.R.C.S.
No 2 Western General Hospital.
Whitworth Street
Manchester
England
MANCHESTER

Fig. 2. Postcard sent to Sir Harry Platt by Sir Geoffrey Jefferson just before he left Petrograd for Austria during the First World War.

In the years following the War honours came to him in profusion. Chief amongst them was his election as a Fellow of the Royal Society in 1947—a unique distinction—Lister Orator in 1948; and in 1950 his knighthood. He travelled widely in Europe, visited the United States on many occasions, and in 1960 visited Australia. The latter trip must have involved great strain, for soon after his return he had a serious illness. In the last six months of his life he battled with courage and gaiety against severe anginal attacks, and died, as he would have wished, in harness.

It will be years before the Manchester Medical School will see his like again. His devoted wife, whose health had also broken down after the Australian trip, survived him by two weeks only. Geoffrey Jefferson's two sons followed him into the field of medicine—Michael, a physician, now in Birmingham; and Anthony, a neurosurgeon on the staff of the United Teaching Hospitals in Sheffield. H. P.

IN MEMORIAM

HOWARD CHRISTIAN NAFFZIGER, Honorary F.R.C.S. (1884–1961)

HOWARD CHRISTIAN NAFFZIGER passed away after a brief illness, which was acute in its onset, and left his many friends totally unprepared to accept his loss.

Late in the afternoon on a dark wintry day in 1921, he came to a large, vacant anatomical laboratory accompanied by his friend and surgical contemporary, Allen Kanavel. A surgical aspirant was stimulated and

Howard Christian Naffziger, M.D., Hon. F.R.C.S.

buoyed by the detailed questions he asked about the brain being dissected to investigate the course and pattern of an obscure association fibre tract as a part of the young man's training to become a neurological surgeon. This was the introduction to many years of friendship and the association in surgery with an older brother whose expression of affection was never withheld. This inherent interest in young people was constantly evidenced by his many acts of kindness and help to younger surgeons.

Adored by his wife, mother and three daughters, he freely and humorously admitted that their combined concern for his well-being had spoiled him outrageously. It was characteristic of him that he could tell and

enjoy a joke upon himself. Those who knew him well always appreciated the re-telling of his encounter with the petite, beautiful Chinese young lady who was present when he was honoured at a dinner given by a doctor who had practised well and with dignity among his people in the famous Chinese quarter of San Francisco. The polite and always proper guest had asked the young lady seated on his left to dance with him, and several times during the evening he had enjoyed her lithe grace on the dance floor. He became bold enough to ask if he could drop her at her home when the dinner had ended. After they had driven out of the section, he inquired where she lived, and her reply was, " Why, Dr. Naffziger, at our nurses' home." Two days later, as they chanced to meet in the hospital elevator, the beautiful young Chinese lady, dressed in her nurse's uniform, smiled demurely and bade him, " Good morning, Doctor Naffziger."

Howard Naffziger was a native of California, a product of its school system and a graduate of the University of California, from which he received a Bachelor's and a Master's degree in Science and a Doctorate in Medicine. He served as an assistant resident at the Johns Hopkins Hospital for a year immediately prior to Harvey Cushing's departure for Boston after his internship and residency at the University of California Hospital. He was stimulated by Cushing and his dedication to the new field of surgery of the nervous system. Trained basically in general surgery, Naffziger was one of the small group with similar backgrounds who developed a continuing interest in neurological surgery at the time of World War I. Their broad education in the principles of general surgery applied to the surgical problems of the nervous system exerted a profound influence upon the development of this surgical specialty in the United States. The insistence that a surgeon interested in the surgical treatment of diseases of the nervous system should first be a surgeon, with fundamental training in surgical principles, was originated by Cushing and staunchly supported by his younger contemporaries. Naffziger was one of the few remaining of this group of men, and often expressed disappointment over the trend to minimize training in surgery for other aspects of the education of the neurosurgical residents. As Chairman of the American Board of Neurological Surgery for the first ten years of its existence, he exerted a great influence to make it an independent Board in a surgical specialty.

Howard Naffziger served his country well during World War I and retained his reserve officer's rank as a Colonel. During World War II, he became a consultant for the Office of Scientific Research and Development of the National Research Council and in this capacity visited the European and Mediterranean Theatres of Operations. He continued an unbroken interest and maintained an unflagging effort as a civilian consultant to the Surgeon General of the Army. Most recently, he served as Chairman of Medical Missions to Poland and the Philippines for the Unitarian Service Committee.

Naffziger's contributions to surgery were many, but the best known were the Naffziger test for obstruction in the subarachnoid space and the unroofing operation he described for progressive exophthalmos. He was honoured by Fellowship in the Royal College of Surgeons of England in 1943, and by honorary memberships in many surgical societies at home and abroad.

At the time when the young American College of Surgeons was suffering growing pains, and its founders were criticized severely by a group of young surgeons who had recently been appointed to chairs of surgery in medical schools, it was Howard Naffziger who was elected to be the first Regent of the College representative of the younger generation of surgeons in the United States. He served as a Regent for 16 years and was then elected President of the College. He was positive and aggressive in his beliefs for the good of surgery, but his aggressiveness had the character of persistence rather than belligerence, and it was thus that he was able to influence progress in the elevation of the care given the surgical patient and set the standards for the education and training of surgeons.

Not content with the contributions he had made to his Alma Mater as a teacher, he became a Regent of the University of California upon his retirement as Professor and Chairman of the Department of Surgery. He served the University unselfishly and vigorously until his death.

There are some men whom one expects to meet at each future meeting of surgeons, though they have passed on. It will be difficult for his friends to look for Howard Naffziger and not find him the centre of a group of stimulating surgical teachers, but it will be impossible not to look for him.

Loyal Davis.

DIARY FOR JULY

Thur.	20		D. Phys. Med. Examination (Part II) begins.
Fri.	21	3.00	PROFESSOR A. I. DARLING—Charles Tomes Lecture—The selective attack of caries on the dental enamel.
		4.00	Annual General Meeting and election of Licentiate to the Board of Faculty of Dental Surgery.
Sat.	22		Board of Faculty of Dental Surgery.
Fri.	28		Basic Sciences Lectures and Demonstrations for Dental Students end.

DIARY FOR AUGUST

Tues.	1		Museum and Library closed this month.
Thurs.	3	2.00	Ordinary Council.
Sat.	5		College closed.
Mon.	7		College closed.

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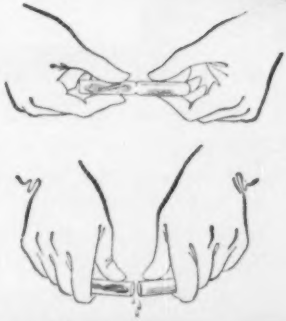

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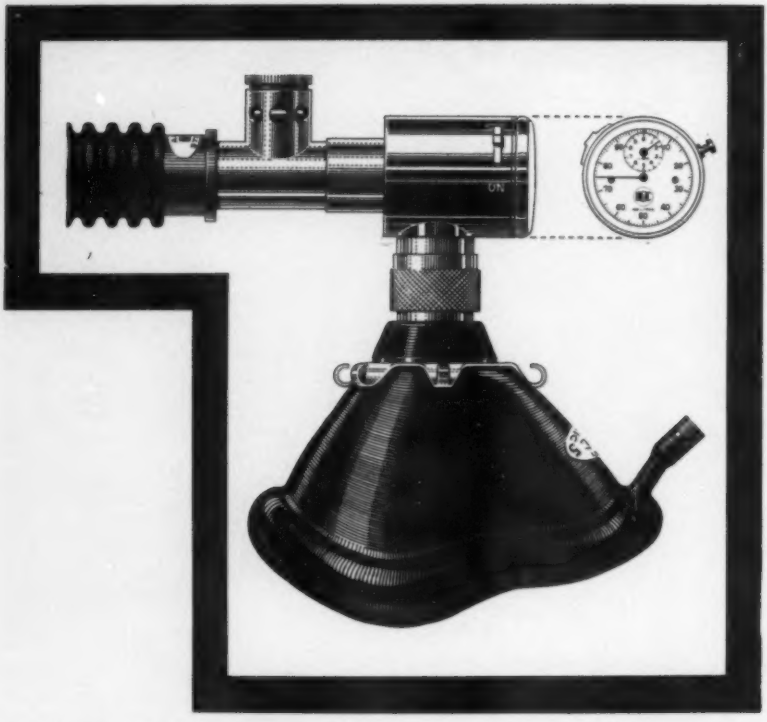

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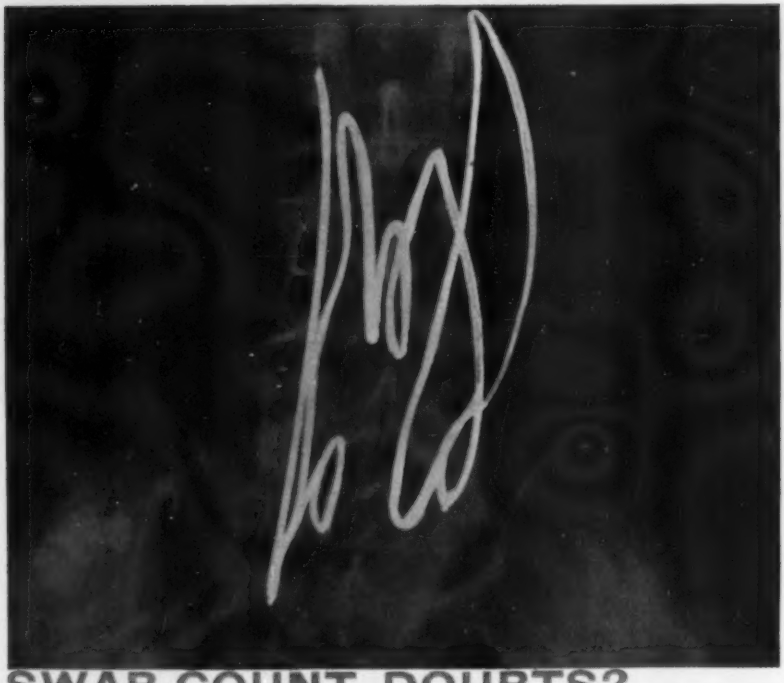

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J. Chassar Moir, *C.B.E., M.D., M.A., D.M., F.R.C.S.E., F.R.C.O.G., Hon. LL.D.,*
Nuffield Professor of Obstetrics and Gynaecology, University of Oxford.

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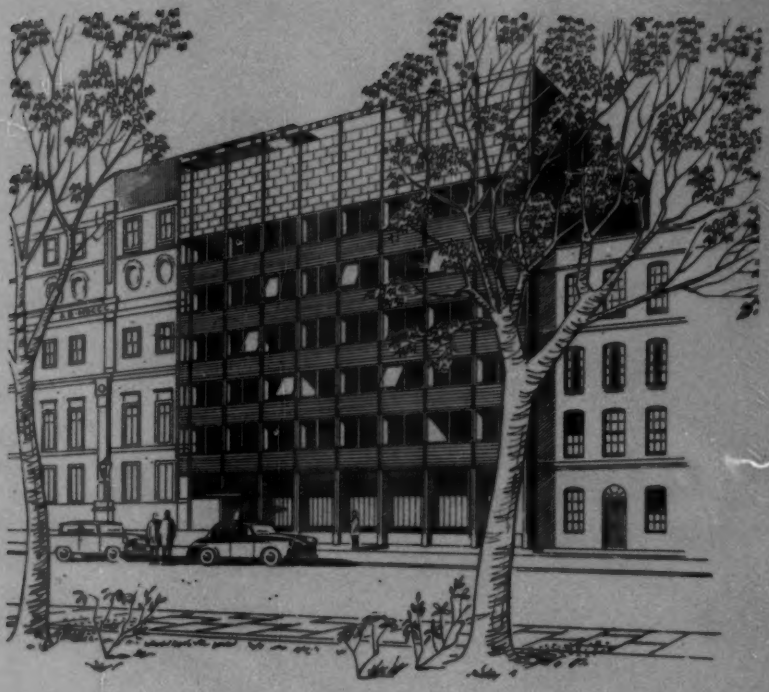

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